

**TITLE V FEDERAL OPERATING PERMIT  
AND  
SMAQMD RULE 201 PERMIT TO OPERATE**

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**TITLE V PERMIT NO:**

TV2011-10-01

**ISSUED TO:**

Kiefer Landfill  
Department of Waste Management and  
Recycling, County of Sacramento  
9850 Goethe Road  
Sacramento, CA 95827

**FACILITY LOCATION:**

Kiefer Landfill  
12701 Kiefer Boulevard and Grantline Road  
Sloughhouse, CA 95683

**PERMIT ISSUED:**

January 25, 2012

**PERMIT LAST AMENDED:**

N/A

**PERMIT EXPIRES:**

January 25, 2017

**RESPONSIBLE OFFICIAL:**

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Department of Waste Management and Recycling  
(916) 399-2585

**CONTACT PERSON:**

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Department of Waste Management and Recycling  
(916) 399-2585

**NATURE OF BUSINESS:**

Municipal Solid Waste Landfill [SIC 4953]

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Larry Greene  
SMAQMD Air Pollution Control Officer

by: \_\_\_\_\_  
Felix Trujillo, Jr.  
Air Quality Engineer

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## I. PERMIT SUMMARY

This permit shall serve as a Permit to Operate pursuant to SMAQMD Rule 201 (General Permit Requirements) and SMAQMD Rule 207 (Title V - Federal Operating Permit Program). Requirements identified in the permit as non-federally enforceable are not enforceable by U.S. EPA or the public. However, they are enforceable by the SMAQMD.

Your application for this air quality Permit to Operate was evaluated for compliance with SMAQMD, State of California and federal air quality rules and regulations. The following listed rules are those that were found to be applicable at the time of permit review, based on the information submitted with the Title V permit application.

Citation	Description	Rule Adoption Date	Federally Enforceable ?
SMAQMD Rule 101	General Provisions and Definitions	09-03-1998	Yes
SMAQMD Rule 102	Circumvention	11-29-1983	Yes
SMAQMD Rule 105	Emission Statements	09-05-1996	Yes
SMAQMD Rule 201	General Permit Requirements (SIP approved)	11-20-1984	Yes
SMAQMD Rule 201	General Permit Requirements (not SIP approved)	08-24-2006	No
SMAQMD Rule 202	New Source Review (not SIP approved - SIP approval of 11-20-1984 version withdrawn 08-19-2011)	10-28-2010	No
SMAQMD Rule 203	Prevention of Significant Deterioration (effective date 08-19-2011)	01-27-2011	Yes
SMAQMD Rule 207	Title V - Federal Operating Permit Program (not SIP approved but rule is applicable as part of U.S. EPA approval of the SMAQMD Title V program)	04-26-2001	Yes
SMAQMD Rule 214	Federal New Source Review (effective date 08-19-2011)	10-28-2010	Yes
SMAQMD Rule 301	Permit Fees - Stationary Source (not SIP approved but Title V fees in rule applicable as part of U.S. EPA approval of the SMAQMD Title V program)	08-01-2008	Yes (Title V provisions only)
SMAQMD Rule 306	Air Toxic Fees	03-27-2003	No
SMAQMD Rule 307	Clean Air Act Fees	09-26-2002	Yes
SMAQMD Rule 401	Ringelmann Chart	04-05-1983	Yes

## I. PERMIT SUMMARY (continued)

Citation	Description	Rule Adoption Date	Federally Enforceable ?
SMAQMD Rule 402	Nuisance	08-03-1977	No
SMAQMD Rule 403	Fugitive Dust	11-29-1983	Yes
SMAQMD Rule 404	Particulate Matter	11-20-1984	Yes
SMAQMD Rule 406	Specific Contaminants	11-29-1983	Yes
SMAQMD Rule 412	Stationary Internal Combustion Engines Located at Major Stationary Sources of NOx	06-01-1995	Yes
SMAQMD Rule 420	Sulfur Content of Fuels	11-29-1983	Yes
SMAQMD Rule 442	Architectural Coatings (SIP approved)	09-05-1996	Yes
SMAQMD Rule 442	Architectural Coatings (not SIP approved)	05-24-2001	No
SMAQMD Rule 448	Gasoline Transfer into Stationary Storage Containers (SIP approved)	02-02-1995	Yes
SMAQMD Rule 448	Gasoline Transfer into Stationary Storage Containers (not SIP approved)	02-26-2009	No
SMAQMD Rule 449	Transfer of Gasoline into Vehicle Fuel Tanks (SIP approved)	09-26-2002	Yes
SMAQMD Rule 449	Transfer of Gasoline into Vehicle Fuel Tanks (not SIP approved)	02-26-2009	No
SMAQMD Rule 466	Solvent Cleaning	10-28-2010	Yes
SMAQMD Rule 602	Breakdown Conditions: Emergency Variance	11-29-1983	No
SMAQMD Rule 701	Emergency Episode Plan	05-27-1999	Yes
SMAQMD Rule 801	New Source Performance Standards	05-26-2011	No
SMAQMD Rule 904	Airborne Toxic Control Measures	05-26-2011	No

## I. PERMIT SUMMARY (continued)

Citation	Description	Rule Adoption Date	Federally Enforceable ?
CARB Airborne Toxic Control Measures	Airborne Toxic Control Measure for Diesel Particulate Matter from Portable Engines Rated At 50 Horsepower and Greater [CCR Title 17, Division 3, Chapter 1, Subchapter 7.5, Section 93116]	02-19-2011 (A)	No
U.S. EPA New Source Performance Standards (NSPS)	Standards of Performance for Stationary Compression Ignition Engines [40 CFR 60 Subpart IIII (begin at 60.4200)]	07-11-2006 (A)	Yes (B)
U.S. EPA New Source Performance Standards (NSPS)	Standards of Performance for Municipal Solid Waste Landfills [40 CFR 60 Subpart WWW (begin at 60.750)]	03-12-1996 (A)	Yes (C)
U.S. EPA National Emission Standards for Hazardous Air Pollutants (NESHAP)	National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills [40 CFR 63 Subpart AAAA (begin at 63.1930)]	01-16-2003 (A)	Yes (C)
U.S. EPA National Emission Standards for Hazardous Air Pollutants (NESHAP)	National Emission Standards for Hazardous Air Pollutants for Stationary Internal Combustion Engines [40 CFR 63 Subpart ZZZZ (begin at 63.6580)]	06-15-2004 (A)	Yes (D)
40 CFR Part 68	Chemical Accident Prevention Provisions	04-09-2004 (A)	Yes
40 CFR Part 82 Subpart F	Protection of Stratospheric Ozone - Recycling and Emissions Reduction	08-11-2011 (A)	Yes

(A) U.S. EPA promulgation date.

(B) Only applicable to the standby IC engine powering an electrical generator.

(C) Not applicable to the five landfill gas fueled prime power IC engines operating at the landfill.

(D) Only applicable to LFG IC Engines 4 and 5.

Future changes in prohibitory rules may establish more stringent requirements that may, at the SMAQMD level, supersede the conditions listed here. For Title V purposes however, the federally enforceable requirements are those found in the Title V permit. Federally enforceable provisions of the Title V permit do not change until the Title V permit is revised.

## II. FACILITY DESCRIPTION

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### Title V Permit Background

<u>Permit Action</u>	<u>Date Issued</u>	<u>Title V Permit No.</u>
Initial Title V Federal Operating Permit issued	01-25-2002	TV1996-10-01
1st Administrative Amendment	11-12-2002	TV1996-10-01A
1st Significant Modification	08-03-2004	TV1996-10-02
2nd Significant Modification	07-05-2005	TV1996-10-03
1st Permit Renewal	01-25-2007	TV2006-10-01
1st Significant Modification	12-31-2009	TV2006-10-02

### Current Permitting Action

This 2nd Permit Renewal will be assigned the following permit number: TV2011-10-01.

### Facility Description

The following facility description is for informational purposes only and does not contain any applicable federally enforceable requirements.

Kiefer Landfill is an active municipal solid waste landfill located approximately 15 miles east of the City of Sacramento near the intersection of Kiefer Boulevard and Grant Line Road. The site is operated by the County of Sacramento, Municipal Services Agency, Department of Waste Management and Recycling (DWMR).

The landfill footprint, which is comprised of modules M1, M-1L and M2 through M11, is approximately 660 acres. The module M1 has no bottom liner. All other modules have or will have bottom liners and leachate collection systems. The entire landfill mass will be subject to landfill gas control similar to the system that exists in Module M1 and M1-L. The Kiefer Landfill began accepting waste into Module M1 in 1967 and began accepting waste into Module M1-L in 1994. The Module M2 began receiving waste in 2003. The final module, Module M11, is expected to complete filling operations between the years 2035 and 2060.

Decomposing waste encapsulated within the landfill produces a gas by-product that is primarily composed of methane, carbon dioxide and nonmethane organic compounds (NMOC). Landfill gas (LFG) is primarily emitted through two sources. LFG can be emitted as fugitive gas through cover soils or through a landfill gas collection system. At the Kiefer Landfill, the landfill gas is collected and sent to a set of two flares for destruction and/or to a set of five internal combustion (IC) engines where it is used as a fuel for the IC engines. The IC engines drive electrical generators that produce approximately 15 megawatts of electricity.

## **II. FACILITY DESCRIPTION (continued)**

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During operation of the flares and IC engines various combustion related air pollutants are released into the atmosphere. Additional particulate matter emissions are generated from construction and operation of the landfill which includes vehicle traffic on paved and unpaved roads and the handling of soil cover material.

Additional sources of air pollutants at the facility include:

1. (2) trommel screens, each driven by a diesel fueled IC engine used to process greenwaste for landfill cover.
2. (2) diesel fueled auxiliary IC engines, each driving the vacuum system and brushes on two street sweepers.
3. Gasoline storage and dispensing equipment.
4. One standby diesel IC engine powering an emergency electrical generator.

### III. FEDERALLY ENFORCEABLE GENERAL REQUIREMENTS

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#### TITLE V PERMIT MODIFICATIONS AND RENEWAL

1. The owner or operator of a stationary source shall submit to the SMAQMD Air Pollution Control Officer a complete Title V permit application for renewal no later than 12 months prior to the expiration date of the Title V permit.  
**[Basis: SMAQMD Rule 207 Section 301.4]**
2. The owner or operator of a stationary source shall submit to the SMAQMD Air Pollution Control Officer a complete Title V permit application for minor Title V permit modification when applicable. The application shall be submitted after receiving any required preconstruction permit from the SMAQMD and before commencing operation associated with the Minor Title V permit modification.  
**[Basis: SMAQMD Rule 207 Section 301.6]**
3. The owner or operator of a stationary source shall submit to the SMAQMD Air Pollution Control Officer a complete Title V permit application for Significant Title V permit modification when applicable. The application shall not be submitted prior to receiving any required preconstruction permit from the SMAQMD but no later than 12 months after commencing an operation associated with the Significant Title V permit modification. Where an existing federally enforceable Title V permit condition would prohibit such change in operation or the stationary source is not required to obtain a preconstruction permit, the owner or operator must obtain a Title V permit modification before commencing operation.  
**[Basis: SMAQMD Rule 207 Section 301.7]**
4. The applicant shall submit to the SMAQMD Air Pollution Control Officer timely updates to the Title V application as new applicable requirements become applicable to the source.  
**[Basis: SMAQMD Rule 207 Section 302.1]**
5. The applicant shall submit to the SMAQMD Air Pollution Control Officer any additional information necessary to correct any incorrect information in the Title V permit application upon becoming aware of such incorrect submittal or if the applicant is notified by the SMAQMD Air Pollution Control Officer of such incorrect submittal.  
**[Basis: SMAQMD Rule 207 Section 302.2]**
6. The applicant shall submit to the SMAQMD Air Pollution Control Officer any additional information relating to the Title V application within 30 days if such information is requested in writing by the SMAQMD Air Pollution Control Officer.  
**[Basis: SMAQMD Rule 207 Section 302.3]**
7. Title V permit expiration terminates the stationary source's right to operate unless a timely and complete Title V permit application for renewal has been submitted and the stationary source complies with SMAQMD Rule 207 Sections 303.1.a, b, c and d, in which case the existing Title V permit will remain in effect until the Title V permit renewal has been issued or denied.  
**[Basis: SMAQMD Rule 207 Section 303.2]**

### **III. FEDERALLY ENFORCEABLE GENERAL REQUIREMENTS**

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8. Any Title V application form, report or compliance certification submitted pursuant to a federally enforceable requirement in this permit shall contain certification by a responsible official. The certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.

**[Basis: SMAQMD Rule 207 Section 304]**

9. This Title V permit shall have a 5-year fixed term from the date of issuance. The Title V permit shall have a new 5-year fixed term from the date of final action on reopening if the responsible official chooses to submit to the SMAQMD a complete Title V application for renewal upon reopening of the Title V permit pursuant to SMAQMD Rule 207 Sections 411 or 412, and the Title V permit is renewed according to the administrative procedures listed in SMAQMD Rule 207 Sections 401 through 408.

**[Basis: SMAQMD Rule 207 Section 306]**

#### **PERMIT COMPLIANCE**

10. The permittee must comply with all conditions of the Title V permit.

**[Basis: SMAQMD Rule 207 Section 305.1(k)(1)]**

11. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the Title V permit.

**[Basis: SMAQMD Rule 207 Section 305.1(k)(2)]**

12. This Title V permit may be modified, revoked, reopened and reissued or terminated for cause.

**[Basis: SMAQMD Rule 207 Section 305.1(k)(3)]**

13. The permittee shall furnish to the SMAQMD Air Pollution Control Officer, within a reasonable time, any information that the SMAQMD Air Pollution Control Officer may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit pursuant to SMAQMD Rule 207 Section 411, or to determine compliance with this Title V permit. Upon request, the permittee shall also furnish to the SMAQMD Air Pollution Control Officer copies of records required to be kept by conditions of this permit or, for information claimed to be confidential, the permittee may furnish such records directly to the EPA along with a claim of confidentiality.

**[Basis: SMAQMD Rule 207 Section 305.1(k)(4)]**

14. Noncompliance with any federally enforceable requirement in this Title V permit is grounds for Title V permit termination, revocation and reissuance, modification, enforcement action, or denial of the Title V permit renewal application. Any violation of the Title V permit shall also be a violation of SMAQMD Rule 207.

**[Basis: SMAQMD Rule 207 Section 305.1(k)(5)]**

15. A pending Title V permit action (e.g. a proposed permit revision) or notification of anticipated noncompliance does not stay any permit condition.

**[Basis: SMAQMD Rule 207 Section 305.1(k)(6)]**

### **III. FEDERALLY ENFORCEABLE GENERAL REQUIREMENTS**

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16. This Title V permit does not convey any property rights of any sort or any exclusive privilege.

**[Basis: SMAQMD Rule 207 Section 305.1(k)(7)]**

17. Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the SMAQMD Air Pollution Control Officer or an authorized representative to perform all of the following:

- A. Enter upon the stationary source's premises where this source is located or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- B. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Title V permit;
- C. Inspect at reasonable times, the stationary source, equipment (including monitoring and air pollution control equipment), practices and operations regulated or required under this Title V permit, and;
- D. As authorized by the Federal Clean Air Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the Title V permit conditions or applicable federal requirements.

**[Basis: SMAQMD Rule 207 Section 413.1]**

### **REPORTS AND RECORDKEEPING**

#### **18. Monitoring Report**

- A. The permittee shall submit to the SMAQMD Air Pollution Control Officer at least once every six months, unless required more frequently by an applicable requirement, reports of all required monitoring.
  - i. All instances of deviations from Title V permit monitoring conditions must be clearly identified in such reports.
- B. The reporting periods for this permit shall be January 01 through June 30 and July 01 through December 31. The reports shall be submitted by July 30 and January 30 following each reporting period respectively.
- C. All required reports must be certified by the responsible official and shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.

**[Basis: SMAQMD Rule 207 Section 501.1]**

### **III. FEDERALLY ENFORCEABLE GENERAL REQUIREMENTS**

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#### **19. Compliance Certification Report**

- A. The permittee shall submit to the SMAQMD Air Pollution Control Officer and U.S. EPA (Air-3, U.S. EPA, Region IX) on an annual basis, unless required more frequently by additional applicable federal requirements such as Section 114(a)(3) and 504(b) (42 U.S.C. Sections 7414(a)(3) and 7661c(b)) of the Federal Clean Air Act, a certification of compliance by the responsible official with all terms and conditions contained in the Title V permit, including emission limitations, standards and work practices.
- B. The reporting period for this permit shall be January 1 through December 31. The report shall be submitted by January 30 following the reporting period.
- C. All required reports must be certified by the responsible official and shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.
- D. The Compliance Certification Report shall include the following:
  - i. The identification of each term or condition of the Title V permit that is the basis of the certification;
  - ii. The method(s) used for determining the compliance status of the source, currently and over the reporting period, and whether such method(s) provides continuous or intermittent data;
  - iii. The status of compliance with the terms and conditions of the Title V permit for the period covered by the certification, based on the method designated in Section D.ii of this condition;
  - iv. Such other facts as the SMAQMD Air Pollution Control Officer may require to determine the compliance status of the source; and
  - v. In accordance with SMAQMD Rule 207 Section 305, a method for monitoring the compliance of the stationary source with its emissions limitations, standards and work practices.

**[Basis: SMAQMD Rule 207 Section 413.4]**

- 20. The permittee shall report within 24 hours of detection any deviation from a federally enforceable Title V permit condition not attributable to an emergency. In order to fulfill the reporting requirement of this condition, the permittee shall notify the SMAQMD Air Pollution Control Officer by telephone followed by a written statement describing the nature of the deviation from the federally enforceable permit condition.

**[Basis: SMAQMD Rule 207 Section 501.3]**

### **III. FEDERALLY ENFORCEABLE GENERAL REQUIREMENTS**

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21. All monitoring data and support information required by a federally enforceable applicable requirement must be kept by the stationary source for a period of 5 years from the date of the monitoring sample, measurement, report or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the federally enforceable applicable requirement in the Title V permit.

**[Basis: SMAQMD Rule 207 Section 502.3]**

#### **RINGELMANN CHART**

22. Except as otherwise provided in SMAQMD Rule 401 Section 100, a person shall not discharge into the atmosphere from any single source of emission whatsoever any air contaminant, other than uncombined water vapor, for a period or periods aggregating more than three minutes in any one hour which is:

- A. As dark or darker in shade as that designated No. 1 on the Ringelmann Chart, as published by the United States Bureau of Mines, or
- B. Of such opacity as to obscure a human observer's view, or a certified calibrated in-stack opacity monitoring system to a degree equal to or greater than No. 1 on the Ringelmann Chart.

**[Basis: SMAQMD Rule 401 Section 301]**

#### **PARTICULATE MATTER**

23. A person shall take every reasonable precaution not to cause or allow the emissions of fugitive dust from being airborne beyond the property line from which the emission originates, from any construction, handling or storage activity, or any wrecking, excavation, grading, clearing of land or solid waste disposal operation. Reasonable precautions shall include, but are not limited to:

- A. Use, where possible, of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the construction of roadways or the clearing of land.
- B. Application of asphalt, oil, water, or suitable chemicals on dirt roads, materials stockpiles and other surfaces which can give rise to airborne dusts;
- C. Other means approved by the SMAQMD Air Pollution Control Officer.

**[Basis: SMAQMD Rule 403 Section 301]**

24. Except as otherwise provided in SMAQMD Rule 406, a person shall not discharge into the atmosphere from any source particulate matter in excess of 0.23 grams per dry standard cubic meter (0.1 grains per dry standard cubic foot).

**[Basis: SMAQMD Rule 404 Section 301]**

### **III. FEDERALLY ENFORCEABLE GENERAL REQUIREMENTS**

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25. A person shall not discharge into the atmosphere particulate matter from the burning of any kind of material containing carbon in a free or combined state, from any single source of emission whatsoever, combustion contaminants in any state or combination thereof exceeding in concentration at the point of discharge: 0.23 grams per dry standard cubic meter (0.1 grains per dry standard cubic foot) of gas calculated to 12% carbon dioxide (CO<sub>2</sub>) at standard conditions.  
**[Basis: SMAQMD Rule 406 Section 302]**

#### **SULFUR COMPOUNDS**

26. A person shall not discharge into the atmosphere from any single source of emission whatsoever sulfur compounds in any state or combination thereof exceeding in concentration at the point of discharge: sulfur compounds, calculated as sulfur dioxide (SO<sub>2</sub>): 0.2% by volume.  
**[Basis: SMAQMD Rule 406 Section 301]**
27. Except as otherwise provided in SMAQMD Rule 420 Section 110, a person shall not burn any gaseous fuel containing sulfur compounds in excess of 1.14 grams per cubic meter (50 grains per 100 cubic feet) of gaseous fuel, calculated as hydrogen sulfide at standard conditions, or any liquid fuel or solid fuel having a sulfur content in excess of 0.5% by weight.  
**[Basis: SMAQMD Rule 420 Section 301]**

#### **ARCHITECTURAL COATING AND SOLVENT CLEANING**

28. Any coating applied to stationary structures and their appurtenances, to mobile homes, to pavements, or to curbs, shall meet the requirements of SMAQMD Rule 442.  
**[Basis: SMAQMD Rule 442 (09-05-1996 version)]**
29. All VOC-containing materials used for architectural coating, including clean-up, shall be stored in closed containers when not in use. In use includes, but is not limited to: being accessed, filled, emptied, maintained or repaired.  
**[Basis: SMAQMD Rule 442 Section 304 (09-05-1996 version)]**
30. The permittee shall comply with the requirements of SMAQMD Rule 466 Solvent Cleaning when using volatile Organic Compounds for the cleanup of architectural coating application equipment or for other applications of solvent cleaning at the facility.  
**[Basis: SMAQMD Rule 466]**
31. The permittee shall keep a record of all architectural coatings purchased that are not clearly labeled as complying with the VOC content limits contained in SMAQMD Rule 442. Compliance in these cases can be determined by maintaining records of the manufacturer's certifications or by Material Safety Data Sheets (MSDS) that demonstrate compliance with the VOC limits of SMAQMD Rule 442.  
**[Basis: SMAQMD Rule 442 (09-05-1996 version) and SMAQMD Rule 207 Section 305]**

### **III. FEDERALLY ENFORCEABLE GENERAL REQUIREMENTS**

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#### **COMPLIANCE**

32. Compliance with the conditions of the Title V permit shall be deemed compliance with all applicable requirements identified in the Title V permit.

**[Basis: SMAQMD Rule 207 Section 307]**

#### **EQUIPMENT BREAKDOWNS**

33. An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology based emission limitations if the following conditions are met:

- A. The affirmative defense of an emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:
  - i. An emergency occurred and that the permittee can identify the cause(s) of the emergency.
  - ii. The permitted facility was at the time being properly operated.
  - iii. During the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the Title V permit.
  - iv. The permittee submitted notice of the emergency to the SMAQMD Air Pollution Control Officer within two working days of the time when emissions limitations were exceeded due to the emergency. The notice must contain a description of the emergency, and corrective actions taken.

- B. In any enforcement proceedings, the permittee seeking to establish the occurrence of an emergency has the burden of proof.

**[Basis: SMAQMD Rule 207 Section 414]**

34. The permittee shall notify the SMAQMD Air Pollution Control Officer of any occurrence which constitutes an emergency as defined in SMAQMD Rule 207 Section 212 as soon as reasonably possible, but no later than one hour after its detection. If the emergency occurs when the SMAQMD Air Pollution Control Officer cannot be contacted, their report of the emergency shall be made at the commencement of the next regular working day. The notification shall identify the time, specific location, equipment involved and to the extent known the cause(s) of the occurrence.

**[Basis: SMAQMD Rule 207 Section 501.2]**

#### **PAYMENT OF FEES**

35. The fee for: (1) the issuance of an initial Title V operating permit, (2) the renewal and/or inspection of a Title V operating permit, (3) the modification of a Title V operating permit or (4) an administrative Title V permit amendment shall be based on the actual hours spent by the SMAQMD staff in evaluating the application and processing the operating permit. The fee shall

### **III. FEDERALLY ENFORCEABLE GENERAL REQUIREMENTS**

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be assessed in accordance with the hourly rate established in Section 308.12 of SMAQMD Rule 301.

**[Basis: SMAQMD Rule 207 Section 305.7 and SMAQMD Rule 301 Section 313]**

36. After the provisions for granting permits as set forth in SMAQMD Rule 207 have been complied with, the permittee will be notified by mail of the fee due and payable and the date the fee is due. If the fee is not paid by the specified due date, the fee shall be increased by one half the amount and the applicant/permittee shall be notified by mail of the increased fee. If the increased fee is not paid within 30 days after notice, the application/permit will be canceled/revoked and the applicant/permittee will be notified by mail.

**[Basis: SMAQMD Rule 207 Section 305.7]**

#### **CLEAN AIR ACT FEES**

37. After the U.S. EPA determines that the SMAQMD has failed to demonstrate attainment of the one hour ozone ambient air quality standard by the attainment year, the permittee, operating any major stationary source of ROC or NOx, shall pay the Clean Air Act fees specified by the SMAQMD Air Pollution Control Officer in accordance with SMAQMD Rule 307.

**[Basis: SMAQMD Rule 307]**

#### **EMISSION STATEMENTS**

38. The permittee, when operating any stationary source that emits 25 tons or more per year of ROC or NOx, shall annually provide the SMAQMD Air Pollution Control Officer with a written emission statement showing actual emissions of ROC and NOx from that source.

**[Basis: SMAQMD Rule 105]**

#### **ACCIDENTAL RELEASES**

39. If subject to Section 112(r) of the federal Clean Air Act of 1990 and 40 CFR Part 68, the permittee shall register and submit to the U.S. EPA the required data related to the risk management plan (RMP) for reducing the probability of accidental releases of any regulated substances listed pursuant to Section 112(r)(3) of the CAA as amended in 40 CFR 68.130. The list of substances, threshold quantities and accident prevention regulations promulgated under 40 CFR Part 68 do not limit in any way the general duty provisions under Section 112(r)(1) of the federal Clean Air Act of 1990.

**[Basis: 40 CFR Part 68]**

40. If subject to Section 112(r) of the federal Clean Air Act of 1990 and 40 CFR Part 68, the permittee shall comply with the requirements of 40 CFR Part 68 no later than the latest of the following dates as provided in 68.10(a):

A. June 21, 1999,

B. Three years after the date on which a regulated substance is first listed under 68.130, or

### **III. FEDERALLY ENFORCEABLE GENERAL REQUIREMENTS**

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C. The date on which a regulated substance is first present above a threshold quantity in a process.

**[Basis: 40 CFR Part 68]**

41. If subject to Section 112(r) of the federal Clean Air Act of 1990 and 40 CFR Part 68, the permittee shall submit any additional relevant information requested by any regulatory agency necessary to ensure compliance with the requirements of 40 CFR Part 68.

**[Basis: 40 CFR Part 68]**

42. If subject to Section 112(r) of the federal Clean Air Act of 1990 and 40 CFR Part 68, the permittee shall annually certify compliance with all applicable requirements of Section 112(r) of the federal Clean Air Act of 1990 as part of the annual compliance certification as required by SMAQMD Rule 207 Section 413.4.

**[Basis: 40 CFR Part 68]**

### **TITLE VI REQUIREMENTS (OZONE DEPLETING SUBSTANCES)**

43. Persons opening appliances containing CFCs for maintenance, service, repair or disposal must comply with the required practices pursuant to 40 CFR 82.156.

**[Basis: 40 CFR Part 82 Subpart F]**

44. Equipment used during the maintenance, service, repair or disposal of appliances containing CFCs must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.

**[Basis: 40 CFR Part 82 Subpart F]**

45. Persons performing maintenance, service, repair or disposal of appliances containing CFCs must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

**[Basis: 40 CFR Part 82 Subpart F]**

### **STARTUP, SHUTDOWN AND MALFUNCTION PLAN**

46. The permittee shall develop and implement a written Startup, Shutdown and Malfunction (SSM) Plan as required by NESHAP Subpart AAAA Municipal Solid waste Landfills and as specified in 40 CFR 63.6(e). The five landfill gas fueled prime power IC engines are exempt from the requirement to be included in a Startup, Shutdown and Malfunction (SSM) Plan provided that the fuel used for the IC engines is "treated" landfill gas.

**[Basis: 40 CFR 63.1960]**

#### **IV. NON-FEDERALLY ENFORCEABLE REQUIREMENTS - GENERAL**

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##### **APPLICABILITY:**

1. The requirements outlined in this section pertain to the SMAQMD Rule 201 Permits to Operate and are not part of the Title V permit.

##### **LOCAL PERMIT RENEWAL:**

2. Permits to Operate issued to Kiefer Landfill, pursuant to SMAQMD Rule 201 (non-Title V Permits to Operate), shall be renewed annually on January 25 and upon payment of the permit renewal fee established pursuant to SMAQMD Rule 301.
3. The SMAQMD Air Pollution Control Officer shall review every Permit to Operate upon annual renewal, pursuant to California Health and Safety Code Section 42301(c), to determine that permit conditions are adequate to ensure compliance with, and the enforceability of, SMAQMD rules and regulations applicable to the article, machine, equipment or contrivance for which the permit was issued. Applicable SMAQMD rules and regulations shall include those which were in effect at the time the permit was issued or modified, or which have subsequently been adopted and made retroactively applicable to an existing article, machine, equipment or contrivance, by the SMAQMD Board of Directors. The SMAQMD Air Pollution Control Officer shall revise the conditions, if such conditions are not consistent, in accordance with all applicable rules and regulations.

##### **GENERAL**

4. The SMAQMD Air Pollution Control Officer and/or authorized representatives, upon the presentation of credentials shall be permitted:
  - A. To enter upon the premises where the source is located or in which any records are required to be kept under the terms and conditions of this permit to operate, and
  - B. At reasonable times to have access to and copy any records required to be kept under the terms and conditions of this Permit to Operate, and
  - C. To inspect any equipment, operation, or method required in this Permit to Operate, and
  - D. To sample emissions from the source or require samples to be taken.
5. Legible copies of all SMAQMD local Authorities to Construct and Permits to Operate shall be maintained on the premises with the equipment.

##### **EQUIPMENT OPERATION:**

6. The equipment shall be properly maintained.
7. This permit does not authorize the emission of air contaminants in excess of those allowed by Division 26, Part 4, Chapter 3, of the Health and Safety Codes of the State of California or the Rules and Regulations of the SMAQMD.

#### **IV. NON-FEDERALLY ENFORCEABLE REQUIREMENTS - GENERAL**

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##### **EQUIPMENT BREAKDOWNS:**

8. The permittee shall notify the SMAQMD Air Pollution Control Officer of any occurrence which constitutes a breakdown, as defined in SMAQMD Rule 602 Section 201, as soon as reasonably possible, but no later than one hour after its detection. If the breakdown occurs when the SMAQMD Air Pollution Control Officer cannot be contacted, the report of breakdown shall be made at the commencement of the next regular working day. The notification shall identify the time, specific location, equipment involved, and to the extent known the cause(s) of the occurrence.
9. Upon notification of the breakdown condition, the SMAQMD Air Pollution Control Officer shall investigate the breakdown condition in accordance with uniform written procedures and guidelines relating to logging of initial reports on appropriate forms, investigation, and enforcement follow-up. If the occurrence does not constitute a breakdown condition, the SMAQMD Air Pollution Control Officer may take appropriate enforcement action.
10. An occurrence which constitutes a breakdown condition, and which persists only until the end of the production run or 24 hours, whichever is sooner (except for continuous air pollution monitoring equipment, for which the period shall be 96 hours) shall constitute a violation of any applicable emission limitation or restriction prescribed by these Rules and Regulations; however, the SMAQMD Air Pollution Control Officer may elect to take no enforcement action if the owner or operator demonstrates to his satisfaction that a breakdown condition exists and the following requirements are met:
  - A. The notification required in SMAQMD Rule 602 Section 301.1 is made; and
  - B. Immediate appropriate corrective measures are undertaken and compliance is achieved, or the process is shutdown for corrective measures before commencement of the next production run or within 24 hours, whichever is sooner (except for continuous air pollution monitoring equipment for which the period shall be 96 hours). If the owner or operator elects to shut down rather than come into immediate compliance, (s)he must nonetheless take whatever steps are possible to minimize the impact of the breakdown within the 24 hour period; and
  - C. The breakdown does not interfere with the attainment and maintenance of any national ambient air quality standard.
11. An occurrence which constitutes a breakdown condition shall not persist longer than the end of the production run or 24 hours, whichever is sooner (except for continuous air pollution monitoring equipment, for which the period shall be 96 hours), unless an emergency variance has been obtained.
12. If the breakdown condition will either require more than 24 hours to correct or persists longer than the end of the production run (except for continuous air pollution monitoring equipment, for which the period shall be 96 hours) the owner or operator may, in lieu of shutdown, request the SMAQMD Air Pollution Control Officer to commence the emergency variance procedure set

#### **IV. NON-FEDERALLY ENFORCEABLE REQUIREMENTS - GENERAL**

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forth in SMAQMD Rule 602 Section 304.

13. No emergency variance shall be granted unless the chairperson of the SMAQMD Hearing Board or other designated member(s) of the SMAQMD Hearing Board finds that:
  - A. The occurrence constitutes a breakdown condition;
  - B. Continued operation is not likely to create an immediate threat or hazard to public health or safety; and
  - C. The requirements for a variance set forth in California Health and Safety Code Sections 42352 and 42353 have been met; and
  - D. The continued operation in a breakdown condition will not interfere with the attainment or maintenance of the national ambient air quality standards.
14. At any time after an emergency variance has been granted, the SMAQMD Air Pollution Control Officer may request, for good cause, that the chairperson or designated member(s) reconsider and revoke, modify or further condition the variance. The procedures set forth in SMAQMD Rule 602 Section 304.1 shall govern any further proceedings conducted under this section.
15. An emergency variance shall remain in effect only for as long as necessary to repair or remedy the breakdown condition, but in no event after a properly noticed hearing to consider an interim or 90 day variance has been held, or 15 days from the date of the subject occurrence, whichever is sooner.
16. Within one week after a breakdown condition has been corrected, the owner or operator shall submit a written report to the SMAQMD Air Pollution Control Officer on forms supplied by the SMAQMD Air Pollution Control Officer describing the causes of the breakdown, corrective measures taken, estimated emissions during the breakdown and a statement that the condition has been corrected, together with the date of correction and proof of compliance. The SMAQMD Air Pollution Control Officer may, at the request of the owner or operator for good cause, extend up to 30 days the deadline for submittal of the report described in this subsection.
17. The burden of proof shall be on the owner or operator of the source to provide sufficient information to demonstrate that a breakdown did occur. If the owner or operator fails to provide sufficient information, the SMAQMD Air Pollution Control Officer shall undertake appropriate enforcement action.
18. Any failure to comply, or comply in a timely manner, with the reporting requirements established in SMAQMD Rule 602 Sections 301.1 and 401 shall constitute a separate violation of SMAQMD Rule 602.
19. It shall constitute a separate violation of SMAQMD Rule 602 for any person to file with the SMAQMD Air Pollution Control Officer a report which falsely, or without probable cause, claims that an occurrence is a breakdown condition.

#### **IV. NON-FEDERALLY ENFORCEABLE REQUIREMENTS - GENERAL**

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20. The SMAQMD Air Pollution Control Officer may grant breakdown relief for Title V facilities under SMAQMD Rule 602. The U.S. EPA, however, may not recognize the breakdown relief as being federally enforceable. Breakdown relief under SMAQMD Rule 602 must be reported as a deviation under this Title V permit.
21. The SMAQMD Hearing Board may grant variance relief for Title V facilities under SMAQMD Rules 601 and 602. The U.S. EPA, however, may not recognize the variance granted as being federally enforceable. A variance granted under SMAQMD Rules 601 or 602 must be reported as a deviation under this Title V permit.

#### **ARCHITECTURAL COATINGS**

22. Unless applied by an aerosol can or contained within a volume of one liter or less any person who supplies, sells offers for sale or manufactures any architectural coating for use within the SMAQMD, as well as any person who applies or solicits the application of any architectural coating within the SMAQMD shall meet the requirements of SMAQMD Rule 442.  
**[SMAQMD Rule 442 (05-24-2001 version)]**

## **V.A. EQUIPMENT SPECIFIC REQUIREMENTS - LANDFILL AND LANDFILL GAS COLLECTION SYSTEM**

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- A. EQUIPMENT DESCRIPTION:** The information specified under this section is enforceable by the SMAQMD, U.S. EPA and the public.

The requirements specified under the following sections apply to the following equipment:

### **Landfill and Landfill Gas Collection System**

P/O No. 17821(Rev01)

1. Landfill area
2. Perimeter wells
3. Interior wells
4. Piping to collect landfill gas from perimeter and interior wells and direct it to the flare or landfill gas treatment system
5. (2) Blowers, 125 HP each

- B. EQUIPMENT SPECIFIC FEDERALLY ENFORCEABLE REQUIREMENTS:** The requirements specified under this section are enforceable by the SMAQMD, U.S. EPA and the public.

### **EMISSION LIMIT REQUIREMENTS**

1. The landfill gas collection system shall operate such that the methane concentration is less than 500 parts per million above background at the surface of the landfill.  
**[Basis: 40 CFR 60.753(d)]**

### **EQUIPMENT OPERATION REQUIREMENTS**

2. The maximum design capacity of the Kiefer Landfill shall not exceed 117.4 million cubic yards.  
**[Basis: SMAQMD Rule 202]**
3. The landfill gas collection system shall be designed to handle the maximum expected gas flow rate from that portion of the landfill that warrants control over the intended use period of the landfill gas control system.  
**[Basis: 40 CFR 60.752(b)(2)(ii)(A)(1)]**
4. Landfill gas shall be collected from each area, cell or group of cells in the landfill in which the initial solid waste has been placed for a period of 5 years or more if active or 2 years or more if closed or at final grade.  
**[Basis: 40 CFR 60.753(a)]**
5. Landfill gas shall be collected at a sufficient extraction rate.  
**[Basis: 40 CFR 60.752(b)(2)(ii)(A)(3)]**
6. The landfill gas collection system shall be designed to minimize off-site migration of subsurface landfill gas.  
**[Basis: 40 CFR 60.752(b)(2)(ii)(A)(4)]**

## **V.A. EQUIPMENT SPECIFIC REQUIREMENTS - LANDFILL AND LANDFILL GAS COLLECTION SYSTEM**

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7. The landfill gas collection system shall operate such that all collected gases are vented to the landfill gas flare or landfill gas treatment system. In the event the collection or control system is inoperable, the gas mover system shall be shut down and all valves in the collection and control system contributing to venting of the gas to the atmosphere shall be closed within 1 hour.

**[Basis: 40 CFR 60.753(e)]**

8. A sampling port and a temperature measuring device or an access port for temperature measurements shall be installed at each landfill gas wellhead.

**[Basis: 40 CFR 60.756(a)]**

9. The landfill gas collection system shall operate such that each landfill gas wellhead exhibits negative pressure except under the following conditions:

A. A fire or increased well temperature. The owner or operator shall record instances when positive pressure occurs in efforts to avoid a fire.

B. Use of a geomembrane or synthetic cover.

C. A decommissioned well.

**[Basis: 40 CFR 60.753(b)]**

10. A. Except as provided in Condition No. 10.B., the landfill gas collection system shall operate such that each interior landfill gas wellhead, achieves the following:

i. A landfill gas temperature less than 55°C and

ii. Either a nitrogen level less than 20 percent or an oxygen level less than 5 percent.

B. The nitrogen and oxygen concentration limits shall not apply to those wells listed in Attachment A provided that the oxygen concentration in the landfill gas **at the main header** does not exceed 5% O<sub>2</sub> by volume (dry basis) and the methane concentration in the landfill gas **at the main header** is not less than 35% methane by volume (dry basis).

C. The owner or operator may establish a higher operating temperature, nitrogen concentration or oxygen concentration at a particular well. A higher operating value demonstration shall show supporting data that the elevated parameter does not cause fires or significantly inhibit anaerobic decomposition by killing methanogens.

**[Basis: 40 CFR 60.753(c)]**

## **V.A. EQUIPMENT SPECIFIC REQUIREMENTS - LANDFILL AND LANDFILL GAS COLLECTION SYSTEM**

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### **MONITORING AND CORRECTIVE ACTION REQUIREMENTS**

11. A device shall be installed that records flow to or bypass of the flare and landfill gas treatment system. The owner or operator shall either:

- A. Install, calibrate and maintain a landfill gas flow rate measuring device that shall record the flow to the flare and landfill gas treatment system at least every 15 minutes; or
- B. Secure the bypass line valve in the closed position with a car-seal or a lock-and-key type configuration.

**[Basis: 40 CFR 60.756(b)(2)]**

12. If applicable, a visual inspection of the seal or closure mechanism on the landfill gas bypass valve for the flare or landfill gas treatment system shall be conducted at least once every month to ensure that the valve is maintained in the closed position and that the landfill gas flow is not diverted through the bypass line.

**[Basis: 40 CFR 60.756(b)(2)(ii)]**

13. Gauge pressure shall be measured monthly in the landfill gas collection header at each individual wellhead.

16. If a positive pressure exists, action shall be initiated to correct the exceedance within 5 calendar days, except for the three conditions allowed under Condition No. 9. If negative pressure cannot be achieved without excess air infiltration within 15 calendar days of the first measurement, the gas collection system shall be expanded to correct the exceedance within 120 days of the initial measurement of positive pressure.

B. Any attempted corrective measure shall not cause exceedances of other operational or performance standards.

**[Basis: 40 CFR 60.756(a)(1)]**

14. A. Temperature and either the nitrogen concentration (%) or the oxygen concentration (%) shall be measured monthly for each interior well.

16. The nitrogen concentration shall be determined using U.S. EPA Method 3C unless an alternative method is established as allowed by 40 CFR 60.752(b)(2)(i).

ii The oxygen concentration shall be determined using U.S. EPA Method 3A or 3C unless an alternative method is established as allowed by 40 CFR 60.752(b)(2)(i).

iii. If a well exceeds the operating parameters stated in Condition No. 10, action shall be initiated to correct the exceedance within 5 calendar days. If correction of the exceedance cannot be achieved within 15 calendar days of the first measurement, the gas collection system shall be expanded to correct the exceedance within 120 days of the initial exceedance.

## **V.A. EQUIPMENT SPECIFIC REQUIREMENTS - LANDFILL AND LANDFILL GAS COLLECTION SYSTEM**

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- iv. Any attempted corrective measure shall not cause exceedances of other operation or performance standards.

**[Basis: 40 CFR 60.753(C)(1), 40 CFR 60.753(C)(2), 40 CFR 60.755(a)(5), 40 CFR 60.756(a)(2), 40 CFR 60.756(a)(3)]**

- B. Oxygen concentration (%) and methane concentration (%) shall be measured monthly at the landfill gas main header.

**[Basis: SMAQMD Rule 202]**

- 15. Surface concentrations of methane shall be measured quarterly around the perimeter of the collection area, along a pattern that traverses the landfill at 30 meter intervals (or a site specific established spacing) and where visual observations indicate elevated concentrations of landfill gas, such as distressed vegetation and cracks or seeps in the cover. The owner or operator may establish an alternative traversing pattern that ensures equivalent coverage. A surface monitoring design plan shall be developed that includes a topographical map with the monitoring route and the rationale for any site specific deviations from the 30 meter intervals. Areas with steep slopes or other dangerous areas may be excluded from the surface testing.

- A. Each area shall be monitored using an organic vapor analyzer, flame ionization detector or other portable monitor.

- B. The organic vapor analyzer, flame ionization detector or other portable monitor shall meet the following specifications:

- i. The portable analyzer shall meet the instrument specifications provided in Section 3 of U.S. EPA Method 21, except that "methane" shall replace all references to VOC.
- ii. The calibration gas shall be methane, diluted to a nominal concentration of 500 parts per million in air.
- iii. To meet the performance evaluation requirements in Section 3.1.3 of U.S. EPA Method 21, the instrument evaluation procedures of Section 4.4 of U.S. EPA Method 21 shall be used.
- iv. The calibration procedures provided in Section 4.2 of U.S. EPA Method 21 shall be followed immediately before commencing a surface monitoring survey.

- C. The background concentration shall be determined by moving the probe inlet upwind and downwind outside the boundary of the landfill at a distance of at least 30 meters from the perimeter wells.

- D. Surface emission monitoring shall be performed in accordance with Section 4.3.1 of U.S. EPA Method 21, except that the probe inlet shall be placed within 5 to 10 centimeters of the ground. Monitoring shall be performed during typical meteorological conditions.

## **V.A. EQUIPMENT SPECIFIC REQUIREMENTS - LANDFILL AND LANDFILL GAS COLLECTION SYSTEM**

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- E. Any reading of 500 parts per million or more of methane above background at any location shall be recorded as a monitored exceedance and the following actions shall be taken. As long as the specified actions listed in paragraphs i. through v. below are taken, the exceedance is not a violation of Condition No. 1.
- i. The location of each monitored exceedance shall be marked and the location recorded.
  - ii. Cover maintenance or adjustments to the vacuum of the adjacent wells to increase the gas collection in the vicinity of each exceedance shall be made and the location shall be re-monitored within 10 calendar days of detecting the exceedance.
  - iii. If the re-monitoring of the location shows a second exceedance, additional corrective action shall be taken and the location shall be monitored again within 10 days of the second exceedance. If the re-monitoring shows a third exceedance for the same location, the action specified in paragraph v. below shall be taken, and no further monitoring of that location is required until the action specified in paragraph v. below has been taken.
  - iv. Any location that initially showed an exceedance but has a methane concentration less than 500 ppm methane above background at the 10-day re-monitoring specified in paragraph ii. Or iii. Above shall be re-monitored 1 month from the initial exceedance. If the 1-month remonitoring shows a concentration less than 500 parts per million above background, no further monitoring of that location is required until the next quarterly monitoring period. If the 1-month remonitoring shows an exceedance, the actions specified in paragraph iii. Above or v. below shall be taken.
  - v. For any location where monitored methane concentration equals or exceeds 500 parts per million above background three times within a quarterly period, a new well or other collection device shall be installed within 120 calendar days of the initial exceedance. An alternative remedy to the exceedance, such as upgrading the blower, header pipes or control device, and a corresponding timeline for installation may be submitted to the SMAQMD Air Pollution Control Officer for approval.

**[Basis: 40 CFR 60.753(d), 40 CFR 60.755(C)]**

16. A program shall be implemented to monitor for cover integrity and implement cover repairs as necessary on a monthly basis.

**[Basis: 40 CFR 60.755(C)(5)]**

## V.A. EQUIPMENT SPECIFIC REQUIREMENTS - LANDFILL AND LANDFILL GAS COLLECTION SYSTEM

### RECORDKEEPING AND REPORTING REQUIREMENTS:

17. The following records shall be continuously maintained onsite for the most recent five year period and shall be made available to the SMAQMD Air Pollution Control Officer upon request. Monthly and quarterly records shall be made available within 30 days of the end of the month and calendar quarter respectively.

Frequency	Information to be recorded
At all times	<p>A. The design capacity report which is the basis for this facility being subject to the provisions of 40 CFR 60.752(b), the current amount of solid waste in-place and the year-by-year waste acceptance rate. Off-site records may be maintained if they are retrievable within 4 hours. Either paper copy or electronic formats are acceptable.  <b>[Basis: 40 CFR 60.758(a)]</b></p> <p>B. The maximum expected gas generation flow rate as calculated using the methodology in 40 CFR 60.755(a)(1).  <b>[Basis: 40 CFR 60.758(b)(1)(i)]</b></p> <p>C. The density of wells, horizontal collectors, surface collectors or other gas extraction devices determined using the procedures in 40 CFR 60.759(a)(1).  <b>[Basis: 40 CFR 60.758(b)(1)(ii)]</b></p> <p>D. Continuous record of either:</p> <ul style="list-style-type: none"> <li>i. The indication of landfill gas flow to the flare or landfill gas treatment system or the indication of landfill gas bypass flow, or</li> <li>ii. Monthly inspections of car-seals or lock-and-key configurations used to seal landfill gas bypass lines.  <b>[Basis: 40 CFR 60.758(c)(2)]</b></li> </ul> <p>E. Record of all collection system exceedances of the following operational standards at each individual well:</p> <ul style="list-style-type: none"> <li>i. Landfill gas collection wellhead gauge pressure - Condition No. 9.</li> <li>ii. Landfill gas temperature - Condition No. 10.</li> <li>iii. Either nitrogen or oxygen level - Condition No. 10.</li> <li>iv. Surface methane concentrations - Condition No. 1.</li> </ul>

## V.A. EQUIPMENT SPECIFIC REQUIREMENTS - LANDFILL AND LANDFILL GAS COLLECTION SYSTEM

Frequency	Information to be recorded
	<p>Where there is an exceedance, the reading in the subsequent month shall be recorded and whether or not the second reading is an exceedance and the location of the exceedance.  <b>[Basis: 40 CFR 60.758(e)]</b></p> <p>F. Record of all collection system exceedances of the following operational standards <b>at the landfill gas main header</b>:</p> <p>i. Landfill gas oxygen concentration - Condition No. 10.B.</p> <p>ii. Landfill gas methane concentration - Condition No. 10.B.  <b>[Basis: SMAQMD Rule 202]</b></p> <p>G. Plot map showing each existing and planned landfill gas collector in the system and providing a unique identification location label for each collector.  <b>[Basis: 40 CFR 60.758(d)]</b></p> <p>H. Record of the installation date and location of all newly installed landfill gas collectors.  <b>[Basis: 40 CFR 60.758(d)(1)]</b></p> <p>I. If applicable, documentation of the nature, date of deposition, amount and location of asbestos-containing or non-degradable waste excluded from collection as well as any non-productive areas excluded from collection.  <b>[Basis: 40 CFR 60.758(d)(2)]</b></p>
Monthly	<p>J. Record of the following equipment operating parameters specified to be monitored at each individual well:</p> <p>i. Landfill gas well head gauge pressure - Condition No. 13.</p> <p>ii. Landfill gas temperature - Condition No. 14.</p> <p>iii. Either nitrogen or oxygen level - Condition No. 14.  <b>[Basis: 40 CFR 60.758(c)]</b></p> <p>K. Record of monitoring for cover integrity and any cover repairs implemented.  <b>[Basis: SMAQMD Rule 202]</b></p>

## V.A. EQUIPMENT SPECIFIC REQUIREMENTS - LANDFILL AND LANDFILL GAS COLLECTION SYSTEM

Frequency	Information to be recorded
	<p>L. Record of the following equipment operating parameters specified to be monitored <b>at the landfill gas main header</b>:</p> <p>i. Landfill gas oxygen concentration - Condition No. 14.B.</p> <p>ii. Landfill gas methane concentration - Condition No. 14.B.  <b>[Basis: SMAQMD Rule 202]</b></p>
Quarterly	<p>M. Record of the following:</p> <p>1. Surface methane concentrations - Condition No. 15.  <b>[Basis: 40 CFR 60.758(c)]</b></p>

18. A written report shall be submitted to the SMAQMD Air Pollution Control Officer by the date indicated and shall contain the following information.

Frequency	Information to be submitted
<p>Report by:</p> <p>(1) July 30 of each year for the six month period: Jan. - June</p> <p>and</p> <p>(2) January 30 of each year for the six month period: July - Dec.</p> <p><b>[Basis: 40 CFR 63.1980(a)]</b></p>	<p>A. Value and length of time for exceedance of the following parameters at each individual well:</p> <p>i. Landfill gas well head gauge pressure - Condition No. 9.</p> <p>a. Identify instances when positive pressure occurs in efforts to avoid a fire.</p> <p>ii. Landfill gas temperature - Condition No. 10.</p> <p>iii. Either nitrogen or oxygen level - Condition No. 10.</p> <p>iv. Surface methane concentrations - Condition No. 1.  <b>[Basis: 40 CFR 60.757(f)(1)]</b></p> <p>B. Value and length of time for exceedance of the following parameters <b>at the landfill gas main header</b>:</p> <p>i. Landfill gas oxygen concentration - Condition No. 10.B.</p> <p>ii. Landfill gas methane concentration - Condition No. 10.B.</p> <p>C. If applicable, description and duration of all periods when the landfill gas stream is diverted from the landfill gas flares or landfill gas treatment system through a landfill gas bypass line or the indication of</p>

## V.A. EQUIPMENT SPECIFIC REQUIREMENTS - LANDFILL AND LANDFILL GAS COLLECTION SYSTEM

Frequency	Information to be submitted
	<p>bypass flow as specified to be monitored in Condition No. 11.  <b>[Basis: 40 CFR 60.757(f)(2)]</b></p> <p>D. If applicable, the results of visual inspection of the seal or closure mechanism on the landfill gas valve bypassing the landfill gas flare or landfill gas treatment system, as specified to be monitored in Condition No. 12, to ensure that the valve is maintained in the closed position and that the landfill gas flow is not diverted through the bypass line.  <b>[Basis: 40 CFR 60.757(f)(2)]</b></p> <p>E. Description, date and duration of all periods when the control device was not operating for a period of one hour and the length of time the control device was not operating.  <b>[Basis: 40 CFR 60.757(f)(3)]</b></p> <p>F. All periods when the landfill gas collection system was not operating in excess of 5 days.  <b>[Basis: 40 CFR 60.757(f)(4)]</b></p> <p>G. The location of each exceedance of the 500 parts per million methane concentration limit, pursuant to Condition No. 15, and the concentration recorded at each location for which an exceedance was recorded in the previous month.  <b>[Basis: 40 CFR 60.757(f)(5)]</b></p> <p>H. The date of installation and the location of each well or collection system expansion added, pursuant to Condition Nos. 14.A.iii and 15.E.v.  <b>[Basis: 40 CFR 60.757(f)(6)]</b></p>
Within 30 days of the landfill closing and waste acceptance cessation	<p>I. Each owner or operator of a controlled landfill shall submit a closure report within 30 days of waste acceptance cessation</p> <p>J. The SMAQMD Air Pollution Control Officer may request additional information as may be necessary to verify that permanent closure has taken place in accordance with 40 CFR 258.60.</p> <p>K. If a closure report has been submitted to the SMAQMD Air Pollution Control Officer, no additional wastes may be placed into the landfill without filing a notification of modification as described under 40 CFR 60.7(a)(4).  <b>[Basis: 40 CFR 60.757(d)]</b></p>

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Frequency	Information to be submitted
30 days prior to the removal or cessation of control equipment operation	<p>L. Each owner or operator of a controlled landfill shall submit an equipment removal report 30 days prior to removal or cessation of operation of the control equipment.</p> <p>M. The equipment removal report shall contain all of the following items:</p> <ul style="list-style-type: none"><li>i. A copy of the closure report submitted in accordance with 40 CFR 60.757(d).</li><li>ii. A copy of the initial performance test report demonstrating that the 15 year minimum control period has expired.</li><li>iii. Dated copies of three successive NMOC emission rate reports demonstrating that the landfill is no longer producing 50 megagrams or greater of NMOC per year.</li></ul> <p>N. The SMAQMD Air Pollution Control Officer may request such additional information as may be necessary to verify that all of the conditions for removal in 40 CFR 60.752(b)(2)(v) have been met. <b>[Basis: 40 CFR 60.757(e)]</b></p>

**V.A. EQUIPMENT SPECIFIC REQUIREMENTS - LANDFILL AND LANDFILL GAS  
COLLECTION SYSTEM**

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**ATTACHMENT A**

**KIEFER LANDFILL WELLS EXEMPT FROM THE  
MAXIMUM OXYGEN CONCENTRATION OF CONDITION NO. 10**

- |     | <u>Well No.</u> |
|-----|-----------------|
| 1.  | H1W             |
| 2.  | H4E             |
| 3.  | H5E             |
| 4.  | H5W             |
| 5.  | H7E             |
| 6.  | H8E             |
| 7.  | H8W             |
| 8.  | H9E             |
| 9.  | H9W             |
| 10. | H12E            |
| 11. | 11              |
| 12. | 17              |
| 13. | 27A             |
| 14. | 27B             |
| 15. | 43              |
| 16. | 45              |
| 17. | 48B             |
| 18. | 65              |
| 19. | 72              |
| 20. | 73              |
| 21. | 112B            |
| 22. | LCO1            |

**[Basis: SMAQMD Rule 202]**

## **V.B. EQUIPMENT SPECIFIC REQUIREMENTS - APC LANDFILL GAS FLARE NO. 1**

- A. EQUIPMENT DESCRIPTION:** The information specified under this section is enforceable by the SMAQMD, U.S. EPA and the public.

The requirements specified under the following sections apply to the following equipment:

### **APC (Air Pollution Control) Landfill Gas Flare No. 1**

P/O No. 23110

Manufacturer: John Zink

Model: ZTOF

Type: Enclosed

Heat Input: 150 MMBTU/hour

Capacity: 5,000 scfm of landfill gas

- B. EQUIPMENT SPECIFIC FEDERALLY ENFORCEABLE REQUIREMENTS:** The requirements specified under this subsection are enforceable by the SMAQMD, U.S. EPA and the public.

### **EMISSION LIMIT REQUIREMENTS**

1. Emissions from Landfill Gas Flare No. 1 shall not exceed the following:  
**[Basis: SMAQMD Rule 202]**

Pollutant	Maximum Allowable Emissions
ROC (A)	A. 2% of inlet NMOC (equivalent to a 98% NMOC destruction efficiency), or B. 20 ppmvd at 3% O <sub>2</sub> measured as hexane
NO <sub>x</sub> (B)	C. 0.06 lb/MMBTU (high heating value)
SO <sub>2</sub> (B)	D. 42.4 lb/MMcf of landfill gas fuel
PM <sub>10</sub> (B)	E. 7.35 lb/MMcf of landfill gas fuel
CO (B)	F. 0.20 lb/MMBTU (high heating value)

(A) U.S. EPA New Source Performance Standard (NSPS) requirement (40 CFR 60 Subpart WWW) and U.S. EPA National Emission Standard for Hazardous Pollutants (NESHAP) requirement (40 CFR 63 Subpart AAAAA).

(B) SMAQMD BACT determination.

## V.B. EQUIPMENT SPECIFIC REQUIREMENTS - APC LANDFILL GAS FLARE NO. 1

2. Emissions from Landfill Gas Flare No. 1 shall not exceed the following:  
**[Basis: SMAQMD Rule 202]**

Pollutant	Emission Factor (A) lb/MMft <sup>3</sup> of LFG	Maximum Allowable Emissions (B)					
		Daily lb/day	Quarter 1 (90 days) lb/qtr	Quarter 2 (91 days) lb/qtr	Quarter 3 (92 days) lb/qtr	Quarter 4 (92 days) lb/qtr	Yearly lb/year
ROC	35.2	253.4	22,810	23,063	23,294	23,294	92,460
NO <sub>x</sub>	30.0	216.0	19,440	19,656	19,872	19,872	78,840
SO <sub>2</sub>	42.4	305.3	27,475	27,780	28,108	28,108	111,471
PM <sub>10</sub>	7.35	52.9	4,763	4,816	4,869	4,869	19,317
PM <sub>2.5</sub>	7.35	52.9	4,763	4,816	4,869	4,869	19,317
CO	100	720.0	64,800	65,520	66,240	66,240	262,800
GHG (C)	55.06 lb/Mcf	198.2 ton/day	17,838 ton/qtr	18,036 ton/qtr	18,234 ton/qtr	18,234 ton/qtr	72,342 ton/yr
GHG (C)	0.001 lb/Mcf	0.0036 ton/day	0.3 ton/qtr	0.3 ton/qtr	0.3 ton/qtr	0.3 ton/qtr	1.2 ton/qtr

(A) Emission factor for ROC is based on 7,857 ppmv NMOC in the landfill gas and 98% destruction efficiency.

Emission factors for NO<sub>x</sub> and CO are based on SMAQMD BACT determination of 0.06 lb/MMBTU and 0.20 lb/MMBTU respectively and a heat content of 500 BTU/scf of landfill gas.

Emission factor for SO<sub>2</sub> is based on SMAQMD BACT determination of 16 grains of sulfur compounds per 100 cubic feet of landfill gas (as H<sub>2</sub>S) and a conversion efficiency to SO<sub>2</sub> of 98%.

Emission factor for PM<sub>10</sub> is based on SMAQMD BACT determination. PM<sub>2.5</sub> is assumed to be equal to PM<sub>10</sub>.

GHG emission factor is the CO<sub>2</sub>e emission factor as per Appendix A of CARB's Regulation for the Mandatory Reporting of Greenhouse Gas Emissions (CCR, Title 17, Subchapter 10, Article 2, sections 95100 to 95133).

(B) Emissions based on 5,000 scfm landfill gas fuel combustion rate, 24 hours/day and the number of days in each calendar quarter. Yearly emissions are equal to the cumulative quarterly emissions.

(C) The potential to emit for GHG is based on the best available CO<sub>2</sub>e emission factor at the time the permit action was taken and the maximum allowed fuel usage rate of 5,000 scfm. Should the emission factor change, the potential to emit will be modified accordingly.

The emission factor for total GHG (55.06 lb/mcf) is based on Appendix A of CARB'S Regulation for the Mandatory Reporting of Greenhouse Gas Emissions (CCR, Title 17, Subchapter 10, Article 2, Sections 95100 TO 95133). It includes combustion byproducts (CH<sub>4</sub>, CO<sub>2</sub> and N<sub>2</sub>O) but it does not include pass-through CO<sub>2</sub> or fugitive GHG emissions.

## V.B. EQUIPMENT SPECIFIC REQUIREMENTS - APC LANDFILL GAS FLARE NO. 1

The emission factor for non-biogenic GHG (0.001 lb/mcf) ) is based on Appendix A of CARB'S Regulation for the Mandatory Reporting of Greenhouse Gas Emissions (CCR, Title 17, Subchapter 10, Article 2, Sections 95100 TO 95133) It includes the non-CO<sub>2</sub> combustion byproducts (CH<sub>4</sub>, and N<sub>2</sub>O) but does not include combustion CO<sub>2</sub> or pass-through CO<sub>2</sub> or fugitive GHG emissions.

3. A. Combined emissions from the Landfill Gas Air Pollution Control System equipment (5 IC engines and 2 landfill gas flares) shall not exceed the following:

P/O 23110 Landfill Gas Flare No. 1 and  
 P/O 23111 Landfill Gas Flare No. 2 and  
 P/O 23112 IC engine No. 1 and  
 P/O 23113 IC engine No. 2 and  
 P/O 23114 IC engine No. 3 and  
 P/O 23115 IC engine No. 4 and  
 P/O 23116 IC engine No. 5

Pollutant	Maximum Allowable Emissions (B)				
	Quarter 1 lb/quarter	Quarter 2 lb/quarter	Quarter 3 lb/quarter	Quarter 4 lb/quarter	Annually tons/year
ROC	34,573	34,958	35,320	35,320	70.1
NOx	43,151	43,631	44,110	44,110	87.5
SO <sub>2</sub>	44,698	45,195	45,715	45,715	90.7
PM <sub>10</sub>	13,350	13,501	13,648	13,648	27.1
CO	219,798	222,258	224,715	224,715	445.7
GHG (A)	85,109.75 ton/qtr	85,109.75 ton/qtr	85,109.75 ton/qtr	85,109.75 ton/qtr	340,439
GHG (A)	6,104.5 ton/qtr	6,104.5 ton/qtr	6,104.5 ton/qtr	6,104.5 ton/qtr	24,418

(A) The potential to emit for GHG is based on the best available emission factors at the time the permit action was taken and the maximum allowed fuel usage rate (10,470 cfm; 5,000 cfm for the flares and 5,470 cfm for the engines). Should the emission factors change, the potential to emit will be modified accordingly.

The CO<sub>2</sub> (52.03 kg/MMBtu), CH<sub>4</sub> (0.9 g/MMBtu) and N<sub>2</sub>O (0.1 g/MMBtu) emission factors and global warming potentials used for total GHG calculations are based on Appendix A of CARB'S Regulation for the Mandatory Reporting of Greenhouse Gas Emissions (CCR, Title 17, Subchapter 10, Article 2, Sections 95100 TO 95133). The

## **V.B. EQUIPMENT SPECIFIC REQUIREMENTS - APC LANDFILL GAS FLARE NO. 1**

total GHG emissions include combustion byproducts (CH<sub>4</sub>, CO<sub>2</sub> and N<sub>2</sub>O), pass-through CO<sub>2</sub> and uncontrolled CH<sub>4</sub> emissions, calculated as CO<sub>2</sub>e.

The CH<sub>4</sub> (0.9 g/MMBtu) and N<sub>2</sub>O (0.1 g/MMBtu) emission factors and global warming potentials used for non-biogenic GHG calculations are based on Appendix A of CARB'S Regulation for the Mandatory Reporting of Greenhouse Gas Emissions (CCR, Title 17, Subchapter 10, Article 2, Sections 95100 TO 95133). It includes the non-CO<sub>2</sub> combustion byproducts (CH<sub>4</sub>, and N<sub>2</sub>O) and uncontrolled CH<sub>4</sub> emissions but does not include combustion CO<sub>2</sub> or pass-through CO<sub>2</sub> emissions, calculated as CO<sub>2</sub>e. Biogenic CO<sub>2</sub> emissions are currently deferred.

(B) Quarterly emissions are based on 24 hours/day and the actual number of days in each calendar quarter. Annual emissions are the sum of the quarterly emissions.

- B. Combined emissions from the 5 IC engines only (excluding the 2 landfill gas flares) shall not exceed the following:

P/O 23112 IC engine No. 1 and  
P/O 23113 IC engine No. 2 and  
P/O 23114 IC engine No. 3 and  
P/O 23115 IC engine No. 4 and  
P/O 23116 IC engine No. 5

Pollutant	Maximum Annual Allowable Emissions (A) tons/year
NOx	79.8

(A) The NOx emissions from the five IC engines are limited by the amount of ERCs provided from sources other than the SMAQMD Priority Reserve Bank Essential Public Services Account. The 7.72 tons of NOx ERCs leased from the Essential Public Services Account (see Condition No. 20) are not allowed to be used for on-site power generation by SMAQMD Rule 205 Section 102.1.

**[Basis: SMAQMD Rule 202]**

## **EQUIPMENT OPERATION AND MONITORING REQUIREMENTS**

4. The concentration of sulfur compounds (measured as hydrogen sulfide) in the landfill gas combusted in Landfill Gas Flare No. 1 shall not exceed 16 grains per 100 cubic feet.

**[Basis: SMAQMD Rule 202]**

5. A sampling port, or other method approved by the SMAQMD Air Pollution Control Officer, shall be installed at the inlet gas line to landfill Gas Flare No. 1. The sampling port shall be located so that an accurate volume flow measurement can be performed.

**[Basis: SMAQMD Rule 202]**

## **V.B. EQUIPMENT SPECIFIC REQUIREMENTS - APC LANDFILL GAS FLARE NO. 1**

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6. Landfill Gas Flare No. 1 exhaust sample ports shall be permanent, accessible and located and constructed as per applicable U.S. EPA, CARB and U.S. OSHA requirements.  
**[Basis: SMAQMD Rule 202]**
7. A landfill gas flowrate measuring device that provides a measurement of landfill gas flow to Landfill Gas Flare No. 1 shall be installed, calibrated and maintained.
  - A. The landfill gas flowrate measuring device shall record the flow to the landfill gas flare at least every 15 minutes.
  - B. The owner or operator shall submit to the SMAQMD Air Pollution Control Officer for approval a description of the landfill gas flowrate measuring device calibration procedure and schedule of calibration.  
**[Basis: SMAQMD Rule 202]**
8. Landfill Gas Flare No. 1 shall be equipped with a temperature monitoring device.
  - A. The thermocouple used to measure the flare temperature shall be located at a distance that is greater than the distance equivalent to 0.6 seconds at the maximum flow rate downstream of the burner.
  - B. The temperature monitoring device shall be equipped with a continuous recorder.
  - C. The temperature monitoring device shall have an accuracy of  $\pm 1$  percent of the temperature being measured expressed in degrees Celsius or  $\pm 0.5$  degrees C, whichever is greater.
  - D. The temperature monitoring device is not precluded from expressing measurements in degrees Fahrenheit as long as the aforementioned accuracy is met.
  - E. The owner or operator shall submit to the SMAQMD Air Pollution Control Officer for approval a description of the temperature monitoring device calibration procedure and schedule of calibration.  
**[Basis: SMAQMD Rule 202]**
9. Landfill Gas Flare No. 1 shall operate at a minimum combustion zone temperature equal to the 3-hour average temperature (measured by the thermocouple specified in Condition No. 8) as determined during the most recent complying source test minus 28 degrees C (minus 50 degrees F)  
**[Basis: SMAQMD Rule 202]**

(The data from the most recent source test is summarized in Attachment B indicating the 3-hour average temperature measured by the thermocouple in Condition No. 8.)
10. The landfill gas condensate injection rate into Landfill Gas Flare No. 1 shall not exceed 3 gallons/minute (manufacturer's data indicating a 3 gallons/minute maximum injection rate has been submitted to the SMAQMD).

## **V.B. EQUIPMENT SPECIFIC REQUIREMENTS - APC LANDFILL GAS FLARE NO. 1**

**[Basis: SMAQMD Rule 202]**

### **RECORDKEEPING AND REPORTING REQUIREMENTS**

11. The following records shall be continuously maintained on site for the most recent 5 year period, except as noted, and shall be made available to the SMAQMD Air Pollution Control Officer upon request. Quarterly and annual records shall be made available within 30 days of the end of the reporting period.

**[Basis: SMAQMD Rule 202]**

Frequency	Information to be recorded
At all times	<p>A. The following information measured during the initial performance test shall be maintained for the life of the flare. Records of subsequent tests or monitoring shall be maintained for a minimum of 5 years. <b>[Basis: 40 CFR 60.758(b)]</b></p> <p>1. Landfill Gas Flare No. 1 average combustion temperature measured at least every 15 minutes and averaged over the same time period as the performance test. <b>[Basis: 40 CFR 60.758(b)(2)(i)]</b></p> <p>2. The percent reduction of NMOC, determined as specified in 40 CFR 60.752(b)(2)(iii)(B), achieved by Landfill Gas Flare No. 1. <b>[Basis: 40 CFR 60.758(b)(2)(ii)]</b></p> <p>B. Continuously monitored landfill gas flowrate to Landfill Gas Flare No. 1 as required by Condition No. 7.</p> <p>C. Continuously monitored combustion temperature of Landfill Gas Flare No. 1 as required by Condition No. 8.</p> <p>D. All 3 hour periods of operation during which Landfill Gas Flare No. 1 average combustion temperature was below the limit established in Condition No. 9. <b>[Basis: 40 CFR 60.758(c)(1)(i)]</b></p> <p>E. Record of calibration reports for the temperature monitoring device.</p> <p>F. Records of source test plans and results to determine compliance with the emission limits in Condition No. 1 shall be maintained for a minimum of 5 years.</p>
Quarterly	G. Comparison of the actual emissions from the Landfill Gas Air

## V.B. EQUIPMENT SPECIFIC REQUIREMENTS - APC LANDFILL GAS FLARE NO. 1

Frequency	Information to be recorded
	Pollution Control System equipment (5 IC engines and 2 landfill gas flares) with the maximum allowable emissions in Condition No. 3.A. (lb/quarter)
Annually	<p>H. Comparison of the actual emissions from the Landfill Gas Air Pollution Control System equipment (5 IC engines and 2 landfill gas flares) with the maximum allowable emissions in Condition No. 3.A. (tons/year)</p> <p>I. Comparison of the actual emissions from the 5 IC engines only (excluding the flare) with the maximum allowable emissions in Condition No. 3.B. (tons/year)</p>

12. A written report shall be submitted to the SMAQMD Air Pollution Control Officer annually by the date indicated and shall contain the following information.

**[Basis: SMAQMD Rule 202]**

Frequency	Information to be submitted
Annually by: January 31  for the previous calendar year	<p>A. All 3-hour periods of operation during which Landfill Gas Flare No. 1 average combustion temperature was below the limit established in Condition No. 9.  <b>[Basis: 40 CFR 60.758(c)(1)(i)]</b></p> <p>B. Description and duration of all periods when the Landfill Gas Air Pollution Control System (5 IC engines and 2 landfill gas flares) was not operating for a period exceeding 1 hour and length of time the Landfill Gas Air Pollution Control System was not operating.  <b>[Basis: 40 CFR 60.757(f)(3)]</b></p>

13. The permittee shall develop and implement a written Startup, Shutdown and Malfunction (SSM) Plan as specified in 40 CFR 63.6(e)

**[Basis: 40 CFR 63.6(e)]**

14. Startup, Shutdown and Malfunction (SSM) Immediate Report

A written SSM Immediate Report shall be submitted to the SMAQMD Air Pollution Control Officer as indicated and shall contain the following information.

**[Basis: 40 CFR 63.1955(b), 40 CFR 63.1980(b), 40 CFR 63.10(d)(5)(ii)]**

Frequency	Information to be submitted
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## V.B. EQUIPMENT SPECIFIC REQUIREMENTS - APC LANDFILL GAS FLARE NO. 1

Frequency	Information to be submitted
<u>Only required if a SSM event occurred.</u>	A. If actions taken during a SSM event <u>are not consistent</u> with the procedures specified in the SSM Plan, the permittee shall:
Within 2 working days →	i. Report to the SMAQMD Air Pollution Control Officer, by telephone call or facsimile (fax), within 2 working days after commencing actions <u>not consistent</u> with the SSM Plan.
Within 7 working days →	ii. Follow with a letter to the SMAQMD Air Pollution Control Officer within 7 working days after the end of the SSM event that: <ul style="list-style-type: none"> <li>a. Contains the name, title and signature of the responsible official who is certifying the accuracy of the report.</li> <li>b. Explains the circumstances of the event.</li> <li>c. Explains the reasons for not following the SSM Plan.</li> <li>d. Explains whether any excess emissions and/or parameter monitoring exceedances are believed to have occurred.</li> </ul>

### 15. Startup, Shutdown and Malfunction (SSM) Periodic Report

A written SSM Periodic Report shall be submitted to the SMAQMD Air Pollution Control Officer by the date indicated and shall contain the following information.

**[Basis: 40 CFR 63.1955(b), 40 CFR 63.1980(b), 40 CFR 63.10(d)(5)(i)]**

Frequency	Information to be submitted
<u>Only required if a SSM event occurred within a reporting period.</u>	A. If actions taken during a SSM event <u>are consistent</u> with the procedures specified in the SSM Plan, the permittee shall state such information in a SSM Report.
Submit by – January 31 July 30	B. The SSM Report shall contain:
for the reporting periods –	i. Number, duration and a brief description of each SSM event.

## V.B. EQUIPMENT SPECIFIC REQUIREMENTS - APC LANDFILL GAS FLARE NO. 1

Frequency	Information to be submitted
January 01 – June 30 July 01 – December 31	ii. A letter containing the name, title and signature of the responsible official who is certifying the accuracy of the report.

16. The permittee shall maintain files of all required SSM information specified below (including all reports and notifications), recorded in a form suitable and readily available for expeditious inspection and review. The files shall be retained for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report or record. At a minimum, the most recent 2 years of data shall be retained on site. The remaining 3 years of data may be retained off site. Such files may be maintained on microfilm, on a computer, on computer floppy disks, on magnetic tape disks or on microfiche.

**[Basis: 40 CFR 63.1955(b), 40 CFR 63.1980(b), 40 CFR 63.10(b), 40 CFR 63.10(d)(5)(ii)]**

Frequency	Information to be recorded
At all times	<p>A. The occurrence and duration of each startup, shutdown or malfunction of operation (i.e., process equipment).</p> <p>B. The occurrence and duration of each malfunction of the required air pollution control and monitoring equipment.</p> <p>C. All required maintenance performed on the air pollution control and monitoring equipment.</p> <p>D. Actions taken during periods of startup, shutdown and malfunction (including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation) when such actions are different from the procedures specified in the affected source's SSM Plan.</p> <p>E. All information necessary, including actions taken, to demonstrate conformance with the affected source's startup, shutdown, and malfunction plan when all actions taken during periods of startup or shutdown (and the startup or shutdown causes the source to exceed any applicable emission limitation in the relevant emission standards), and malfunction (including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation) are consistent with the procedures specified in such plan.</p> <p>i. The information needed to demonstrate conformance with the SSM Plan may be recorded using a "checklist" or some other effective</p>

## V.B. EQUIPMENT SPECIFIC REQUIREMENTS - APC LANDFILL GAS FLARE NO. 1

Frequency	Information to be recorded
	<p>form of recordkeeping, in order to minimize the recordkeeping burden for conforming events.</p> <p>F. Each period during which a continuous monitoring system (CMS) is malfunctioning or inoperative (including out-of-control periods).</p> <p>G. All required measurements needed to demonstrate compliance with a relevant standard (including, but not limited to, 15-minute averages of CMS data, raw performance testing measurements, and raw performance evaluation measurements, that support data that the source is required to report).</p> <p>H. All results of performance tests, CMS performance evaluations, and opacity and visible emission observations.</p> <p>I. All measurements as may be necessary to determine the conditions of performance tests and performance evaluations.</p> <p>J. All CMS calibration checks.</p> <p>K. All adjustments and maintenance performed on CMS.</p> <p>L. All documentation supporting initial notifications and notifications of compliance status under 40 CFR 63.9.</p> <p>M. All required CMS measurements (including monitoring data recorded during unavoidable CMS breakdowns and out-of-control periods).</p> <p>N. The date and time identifying each period during which the CMS was inoperative except for zero (low-level) and high-level checks.</p> <p>O. The date and time identifying each period during which the CMS was out of control, as defined in 40 CFR 63.8l(7).</p> <p>P. The specific identification (i.e., the date and time of commencement and completion) of each period of excess emissions and parameter monitoring exceedances, as defined in the relevant standard(s), that occurs during startups, shutdowns, and malfunctions of the affected source.</p> <p>Q. The specific identification (i.e., the date and time of commencement and completion) of each time period of excess emissions and parameter monitoring exceedances, as defined in the relevant</p>

## V.B. EQUIPMENT SPECIFIC REQUIREMENTS - APC LANDFILL GAS FLARE NO. 1

Frequency	Information to be recorded
	<p>standard(s), that occurs during periods other than startups, shutdowns, and malfunctions of the affected source.</p> <p>R. The nature and cause of any malfunction (if known).</p> <p>S. The corrective action taken or preventive measures adopted.</p> <p>T. The nature of the repairs or adjustments to the CMS that was inoperative or out of control.</p> <p>U. The total process operating time during the reporting period.</p> <p>V. All procedures that are part of a quality control program developed and implemented for CMS under 40 CFR 63.8(d).</p>

## EMISSION REDUCTION CREDIT (ERC) REQUIREMENTS

### 17. For SMAQMD Rule 202 New Source Review purposes:

The permittee shall surrender (and has surrendered – See Condition No. 21) ROC ERCs to the SMAQMD Air Pollution Control Officer to offset the following amount of Landfill Gas Air Pollution Control System ROC emissions:

**[Basis: SMAQMD Rule 202]**

Equipment	Amount of ROC Emissions for which ERCs are to be Provided lb/quarter			
	Quarter 1	Quarter 2	Quarter 3	Quarter 4
Landfill Gas Air Pollution Control System consisting of: 1. P/O 23110 Landfill Gas Flare No. 1 2. P/O 23111 Landfill Gas Flare No. 2 3. P/O 23112 IC engine No. 1 4. P/O 23113 IC engine No. 2 5. P/O 23114 IC engine No. 3 6. P/O 23115 IC engine No. 4 7. P/O 23116 IC engine No. 5	3726	3768	3809	3809

### 18. For SMAQMD Rule 202 New Source Review purposes:

The permittee shall surrender (and has surrendered – See Condition No. 22) NOx ERCs to the SMAQMD Air Pollution Control Officer to offset the following amount of Landfill Gas Air Pollution Control System NOx emissions:

## V.B. EQUIPMENT SPECIFIC REQUIREMENTS - APC LANDFILL GAS FLARE NO. 1

### [Basis: SMAQMD Rule 202]

Equipment	Amount of NOx Emissions for which ERCs are to be Provided lb/quarter			
	Quarter 1	Quarter 2	Quarter 3	Quarter 4
Landfill Gas Air Pollution Control System consisting of: 1. P/O 23110 Landfill Gas Flare No. 1 2. P/O 23111 Landfill Gas Flare No. 2 3. P/O 23112 IC engine No. 1 4. P/O 23113 IC engine No. 2 5. P/O 23114 IC engine No. 3 6. P/O 23115 IC engine No. 4 7. P/O 23116 IC engine No. 5	20,484	20,711	20,938	20,938

### 19. For U.S. EPA Pollution Control Project purposes:

The permittee shall surrender (and has surrendered – See Condition No. 23) NOx ERCs to the SMAQMD Air Pollution Control Officer to offset the following amount of Landfill Gas Air Pollution Control System NOx emissions:

### [Basis: SMAQMD Rule 202]

Equipment	Amount of NOx Emissions for which ERCs are to be Provided (A) (B) tons/year
Landfill Gas Air Pollution Control System consisting of: 1. P/O 23110 Landfill Gas Flare No. 1 2. P/O 23111 Landfill Gas Flare No. 2 3. P/O 23112 IC engine No. 1 4. P/O 23113 IC engine No. 2 5. P/O 23114 IC engine No. 3 6. P/O 23115 IC engine No. 4 7. P/O 23116 IC engine No. 5	87.5

(A) The requirement for these ERCs is a result of U.S. EPA's Pollution Control Project offsetting policy:

- i. U.S. EPA excludes the project from Federal New Source Review rules if it qualifies as a Pollution Control Project.
- ii. The project qualifies as a Pollution Control Project if it is environmentally beneficial.
- iii. The project is environmentally beneficial if all NOx emissions from the project are offset.
- iv. The amount of ERCs to be provided is not in addition to the amount specified in

## V.B. EQUIPMENT SPECIFIC REQUIREMENTS - APC LANDFILL GAS FLARE NO. 1

Condition No. 18.

20. The permittee shall surrender (and has surrendered – See Condition No. 24) PM10 ERCs to the SMAQMD Air Pollution Control Officer to offset the following amount of Landfill Gas Air Pollution Control System PM10 emissions:

**[Basis: SMAQMD Rule 202]**

Equipment	Amount of PM10 Emissions for which ERCs are to be Provided lb/quarter			
	Quarter 1	Quarter 2	Quarter 3	Quarter 4
Landfill Gas Air Pollution Control System consisting of: 1. P/O 23110 Landfill Gas Flare No. 1 2. P/O 23111 Landfill Gas Flare No. 2 3. P/O 23112 IC engine No. 1 4. P/O 23113 IC engine No. 2 5. P/O 23114 IC engine No. 3 6. P/O 23115 IC engine No. 4 7. P/O 23116 IC engine No. 5	5,799	5,909	6,016	6,016

21. The following ROC ERCs have been surrendered to the SMAQMD Air Pollution Control Officer to comply with the SMAQMD Rule 202 New Source Review requirement as stated in Condition No. 17:

Emission Reduction Credit Certificate No.	Face Value of ROC ERC Certificates Surrendered lb/quarter				Offset Ratio	Value Applied to the Project ROC Emission Liability lb/quarter			
	Qtr 1	Qtr 2	Qtr 3	Qtr 4		Qtr 1	Qtr 2	Qtr 3	Qtr 4
C101005 SMAQMD Community Bank <b>Lease expires on: 12-31-2014</b> (A)	3726	3768	3809	3809	1:1	3726	3768	3809	3809

(A) ERCs in the amount specified shall be provided at all times that the permitted equipment is allowed to operate:

1. This Permit to Operate shall expire on the date that the ERCs expire unless replacement ERCs have been provided as specified in (2) below.
2. When ERCs are provided that have an expiration date, **and prior to their expiration**

## V.B. EQUIPMENT SPECIFIC REQUIREMENTS - APC LANDFILL GAS FLARE NO. 1

**only**, the permittee can provide replacement ERCs. The permittee shall submit a valid permit application to modify this Permit to Operate and shall pay the required permit fees. The application shall be filed prior to the ERC expiration date such that sufficient time is available to SMAQMD staff to process the application.

- (a) The application shall be evaluated in accordance with the requirements of the current SMAQMD Rule 202 - New Source Review and SMAQMD Rule 204 - Emission Reduction Credits.
- (b) ERCs shall be required in an amount which is the larger of:
  - (1) The originally specified amount, or
  - (2) The amount specified by the current SMAQMD Rule 202 - New Source Review at the time of replacement.
3. Failure to provide replacement ERCs prior to the expiration date of the current ERCs associated with this Permit to Operate shall require that the permittee reapply for an Authority to Construct and Permit to Operate for the subject equipment if continued operation of the equipment is desired. The equipment shall be subject to Best Available Control Technology requirements and offsetting requirements of SMAQMD Rule 202 - New Source Review at the time of repermitting.

22. The following NOx/ROC ERCs have been surrendered to the SMAQMD Air Pollution Control Officer to comply with the SMAQMD Rule 202 New Source Review requirement as stated in Condition No. 18:

**[Basis: SMAQMD Rule 202]**

Emission Reduction Credit Certificate No.	Face Value of NOx/ROC ERC Certificates Surrendered lb/quarter				Inter-Pollutant Trading Ratio	Offset Ratio	Value Applied to the Project NOx Emission Liability lb/quarter			
	Qtr 1	Qtr 2	Qtr 3	Qtr 4			Qtr 1	Qtr 2	Qtr 3	Qtr 4
98-00470 Rancho Seco ICE NOx	1,448	1,448	1,448	1,448	N/A	1.3:1	1,114	1,114	1,114	1,114
98-00472 Rancho Seco ICE NOx	1,160	1,160	1,160	1,160	N/A	1.3:1	892	892	892	892
98-00474 Rancho Seco ICE NOx	2,250	2,250	2,250	2,250	N/A	1.3:1	1,731	1,731	1,731	1,731

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Emission Reduction Credit Certificate No.	Face Value of NOx/ROC ERC Certificates Surrendered lb/quarter				Inter-Pollutant Trading Ratio	Offset Ratio	Value Applied to the Project NOx Emission Liability lb/quarter			
	Qtr 1	Qtr 2	Qtr 3	Qtr 4			Qtr 1	Qtr 2	Qtr 3	Qtr 4
98-00476 Rancho Seco ICE NOx	2,727	2,727	2,727	2,727	N/A	1.3:1	2,098	2,098	2,098	2,098
98-00478 Rancho Seco Boiler NOx	12,089	4,193	719	4,529	N/A	1.3:1	9,299	3,225	553	3,484
EC-0002 Yolo-Solano APCD Spreckles Sugar NOx	0	4,884	2,719	3,539	N/A	1.5:1	0	3,256	1,813	2,359
EC-0004 Yolo-Solano APCD Spreckles Sugar NOx	0	0	6,175	958	N/A	1.5:1	0	0	4,117	639
98-00004 Placer County APCD Formica Corporation ROC	16,050	25,185	25,863	25,865	2:1	1.5:1	5,350	8,395	8,621	8,622
Total							20,484	20,711	20,938	20,938

## V.B. EQUIPMENT SPECIFIC REQUIREMENTS - APC LANDFILL GAS FLARE NO. 1

23. The following NOx/ROC ERCs have been surrendered to the SMAQMD Air Pollution Control Officer to comply with the U.S. EPA requirement stated in Condition No. 19:

**[Basis: SMAQMD Rule 202]**

Emission Reduction Credit Certificate No.	Face Value of NOx/ROC ERC Certificates Surrendered lb/quarter				Inter-Pollutant Trading Ratio	Offset Ratio	Value Applied to the Project NOx Emission Liability ton/year
	Qtr 1	Qtr 2	Qtr 3	Qtr 4			
99-00649 Poppy Ridge NOx	4,089	6,029	6,132	4,259	N/A	1:1	10.25
01-00752 Poppy Ridge NOx	522	391	36	457	N/A	1:1	0.70
01-00752 Poppy Ridge NOx	715	715	715	715	N/A	1:1	1.43
98-00470 Rancho Seco ICE NOx	1,448	1,448	1,448	1,448	N/A	1:1	2.90
98-00472 Rancho Seco ICE NOx	1,160	1,160	1,160	1,160	N/A	1:1	2.32
98-00474 Rancho Seco ICE NOx	2,250	2,250	2,250	2,250	N/A	1:1	4.50
98-00476 Rancho Seco ICE NOx	2,727	2,727	2,727	2,727	N/A	1:1	5.45
98-00478 Rancho Seco Boiler NOx	12,089	4,193	719	4,529	N/A	1:1	10.77

## V.B. EQUIPMENT SPECIFIC REQUIREMENTS - APC LANDFILL GAS FLARE NO. 1

Emission Reduction Credit Certificate No.	Face Value of NOx/ROC ERC Certificates Surrendered lb/quarter				Inter-Pollutant Trading Ratio	Offset Ratio	Value Applied to the Project NOx Emission Liability ton/year
	Qtr 1	Qtr 2	Qtr 3	Qtr 4			
EC-0002 Yolo-Solano APCD Spreckles Sugar NOx	0	4,884	2,719	3,539	N/A	1:1	5.57
EC-0004 Yolo-Solano APCD Spreckles Sugar NOx	0	0	6,175	958	N/A	1:1	3.57
98-00004 Placer APCD Formica Corporation ROC	16,848	35,070	43,089	34,296	2:1	1:1	32.33
P11-1008 Essential Public Services Account SMAQMD Priority Reserve Bank <b>Lease expires on: 01-01-2015</b> (A) NOx	4,588	2,890	3,252	4,704	N/A	1:1	7.72
Total							87.5

(A) ERCs in the amount specified shall be provided at all times that the permitted equipment is allowed to operate:

- i. The permit shall expire on the date that the ERCs expire unless replacement ERCs have been provided as specified in (ii) below.
- ii. When ERCs are provided that have an expiration date, **and prior to their expiration only**, the permittee can provide replacement ERCs. The permittee shall submit a valid permit application to modify this Permit to Operate and shall pay the required permit fees. The application shall be filed prior to the ERC expiration date such that sufficient time is available to SMAQMD staff to process the application.
  - a. The application shall be evaluated in accordance with the requirements of the

## V.B. EQUIPMENT SPECIFIC REQUIREMENTS - APC LANDFILL GAS FLARE NO. 1

current SMAQMD Rule 202 – New Source Review and SMAQMD Rule 204 – Emission Reduction Credits.

b. ERCs shall be required in an amount which is the larger of:

(1) The originally specified amount, or

(2) The amount specified by the current SMAQMD Rule 202 – New Source Review at the time of replacement.

iii. Failure to provide replacement ERCs prior to the expiration date of the current ERCs associated with this Permit to Operate shall require that the permittee reapply for an Authority to Construct and Permit to Operate for the subject equipment if continued operation of the equipment is desired. The equipment shall be subject to Best Available Control Technology requirements and offsetting requirements of SMAQMD Rule 202 – New Source Review at the time of repermitting.

24. The following PM10 ERCs have been surrendered to the SMAQMD Air Pollution Control Officer to comply with the SMAQMD Rule 202 New Source Review requirement as stated in Condition No. 20:

**[Basis: SMAQMD Rule 202]**

Emission Reduction Credit Certificate No.	Face Value of PM10 ERC Certificates Surrendered lb/quarter				Offset Ratio	Value Applied to the Project PM10 Emission Liability lb/quarter			
	Qtr 1	Qtr 2	Qtr 3	Qtr 4		Qtr 1	Qtr 2	Qtr 3	Qtr 4
2005-03 Placer County APCD Lincoln Brand Feeds	4329	4446	4558.5	4558.5	1.5:1	2886	2964	3039	3039
2005-06 Placer County APCD Lincoln Brand Feeds	2425	2308	2195.5	2195.5	1.5:1	1616.7	1538.7	1463.7	1463.7
C053003 SMAQMD Community Bank <b>Lease expires on: 07-01-2035 (A)</b>	1296.3	1406.3	1513.3	1513.3	1:1	1296.3	1406.3	1513.3	1513.3
Total						5799	5909	6016	6016

(A) ERCs in the amount specified shall be provided at all times that the permitted equipment is allowed to operate:

i. The permit shall expire on the date that the ERCs expire unless replacement ERCs have been provided as specified in (ii) below.

ii. When ERCs are provided that have an expiration date, **and prior to their expiration only**, the permittee can provide replacement ERCs. The permittee shall submit a valid

## **V.B. EQUIPMENT SPECIFIC REQUIREMENTS - APC LANDFILL GAS FLARE NO. 1**

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permit application to modify this Permit to Operate and shall pay the required permit fees. The application shall be filed prior to the ERC expiration date such that sufficient time is available to SMAQMD staff to process the application.

- a. The application shall be evaluated in accordance with the requirements of the current SMAQMD Rule 202 – New Source Review and SMAQMD Rule 204 – Emission Reduction Credits.
- b. ERCs shall be required in an amount which is the larger of:
  - (1) The originally specified amount, or
  - (2) The amount specified by the current SMAQMD Rule 202 – New Source Review at the time of replacement.
- iii. Failure to provide replacement ERCs prior to the expiration date of the current ERCs associated with this Permit to Operate shall require that the permittee reapply for an Authority to Construct and Permit to Operate for the subject equipment if continued operation of the equipment is desired. The equipment shall be subject to Best Available Control Technology requirements and offsetting requirements of SMAQMD Rule 202 – New Source Review at the time of repermitting.

### **EMISSION TESTING REQUIREMENTS:**

25. An emission test shall be conducted each calendar year to demonstrate compliance with Condition Nos. 1, 2, 3, 4 and 9:

- A. Submit a Source Test Plan to the SMAQMD Air Pollution Control Officer for approval at least 30 days before the source test is to be performed.
- B. Notify the SMAQMD Air Pollution Control Officer at least 7 days prior to the source test date if the date has changed from that approved in the Source Test Plan.
- C. Submit the Source Test Results Report to the SMAQMD Air Pollution Control Officer within 60 days from the completion of the source test.
- D. The source test shall be conducted at the exhaust of the landfill gas flare (except for hydrogen sulfide test which shall use the inlet) and shall include a test for:
  - i. Either:
    - a. NMOC destruction efficiency, or
    - b. Total NMOC (ppmvd at 3% O<sub>2</sub> measured as hexane)
  - ii. Nitrogen oxides, NO<sub>x</sub>
  - iii. Carbon monoxide, CO
  - iv. Particulate Matter, PM<sub>10</sub>
  - v. Hydrogen sulfide, H<sub>2</sub>S (inlet)

## **V.B. EQUIPMENT SPECIFIC REQUIREMENTS - APC LANDFILL GAS FLARE NO. 1**

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- vi. Combustion temperature (as measured by the thermocouple required by Condition No. 8)
  - vii. Landfill gas flow rate
- E. The SMAQMD Air Pollution Control Officer may waive the annual source test requirement for PM<sub>10</sub> if, in the SMAQMD Air Pollution Control Officer's sole judgment, previous source test results indicate that an adequate compliance margin has been maintained.
- F. Compliance with the NO<sub>x</sub> emission limit shall be determined using one of the following source test methods:
- i. CARB Method 100;
  - ii. U.S. EPA Method 7E; or
  - iii. Any other method approved by the U.S. Environmental Protection Agency and the SMAQMD Air Pollution Control Officer.

**[Basis: SMAQMD Rule 202]**

### **RACT DETERMINATION REQUIREMENTS**

26. This permit incorporates a Reasonably Available Control Technology (RACT) determination as required by the federal Clean Air Act (as amended 1990) Sections 182(b)(2) and 182(f).  
**[Basis: SMAQMD Rule 202 and 40 CFR 52.220(c)(382)(i)(A)(1)]**
27. For federal enforcement purposes the RACT provisions of this permit that are approved by the U.S. Environmental Protection Agency shall remain in effect as part of the State of California Implementation Plan (SIP) until replaced pursuant to 40 CFR 51 and approved by the U.S. EPA.  
**[Basis: SMAQMD Rule 202 and 40 CFR 52.220(c)(382)(i)(A)(1)]**

**V.B. EQUIPMENT SPECIFIC REQUIREMENTS - APC LANDFILL GAS FLARE NO. 1**

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**ATTACHMENT B**

Actual Flare Combustion Temperature Observed  
 During the Most Recent Landfill Gas Flare No. 1 Source Test

Date of Test	Actual 3-Hour Average Flare Combustion Temperature Observed During Source Test degrees F	Minimum 3-Hour Flare Combustion Temperature to Demonstrate Continuous Compliance degrees F
07-19-2010	1560	1510
Historical Data ↓		
03-31-2009	1400	1350
04-22-2008	1403	1353
07-02-2007	1464	1414
10-24-2006	1540	1490
11-07-2005	1570	1520
11-01-2004	1560	1510
11-17-2003	1550	1500
11-06-2002	1570	1520

**[Basis: SMAQMD Rule 202]**

## **V.C. EQUIPMENT SPECIFIC REQUIREMENTS - APC LANDFILL GAS FLARE NO. 2**

- A. EQUIPMENT DESCRIPTION:** The information specified under this section is enforceable by the SMAQMD, U.S. EPA and the public.

The requirements specified under the following sections apply to the following equipment:

### **APC (Air Pollution Control) Landfill Gas Flare No. 2**

P/O No. 23111

Manufacturer: Perennial Energy

Model: FL-156-44-E

Serial No.: FL-1606

Type: Enclosed

Heat Input: 120 MMBTU/hour

Capacity: 4,000 scfm of landfill gas

- B. EQUIPMENT SPECIFIC FEDERALLY ENFORCEABLE REQUIREMENTS:** The requirements specified under this subsection are enforceable by the SMAQMD, U.S. EPA and the public.

### **EMISSION LIMIT REQUIREMENTS**

1. Emissions from Landfill Gas Flare No. 2 shall not exceed the following:

**[Basis: SMAQMD Rule 202]**

Pollutant	Maximum Allowable Emissions
ROC (A)	A. 2% of inlet NMOC (equivalent to a 98% NMOC destruction efficiency), or B. 20 ppmvd at 3% O <sub>2</sub> measured as hexane
NO <sub>x</sub> (B)	A. 25 lb/MMft <sup>3</sup> of landfill gas fuel [equivalent to 0.05 lb/MMBTU at 500 BTU/ft <sup>3</sup> of LFG]
SO <sub>2</sub> (C)(D)	D. 20 lb/MMft <sup>3</sup> of landfill gas fuel [equivalent to 0.04 lb/MMBTU at 500 BTU/ft <sup>3</sup> of LFG] [equivalent to 7.4 grains of S (measured as H <sub>2</sub> S)/100 ft <sup>3</sup> of LFG combusted]
PM <sub>10</sub> (C)	E. 7.35 lb/MMft <sup>3</sup> of landfill gas fuel [equivalent to 0.0147lb/MMBTU at 500 BTU/ft <sup>3</sup> of LFG]
CO (B)	F. 75 lb/MMft <sup>3</sup> of landfill gas fuel [equivalent to 0.15 lb/MMBTU at 500 BTU/ft <sup>3</sup> of LFG]

- (A) U.S. EPA New Source Performance Standard (NSPS) requirement (40 CFR 60 Subpart WWW) and U.S. EPA National Emission Standard for Hazardous Pollutants (NESHAP) requirement (40 CFR 63 Subpart AAAA).
- (B) Permittee requested emission limit that is more restrictive than the SMAQMD BACT emission limit.

## V.C. EQUIPMENT SPECIFIC REQUIREMENTS - APC LANDFILL GAS FLARE NO. 2

(C) SMAQMD BACT determination.

(D) The permittee shall submit an Authority to Construct application to the SMAQMD if source testing indicates that SO<sub>2</sub> mass emissions exceed the permit limit. The Authority to Construct application shall be submitted within 45 days of the SMAQMD receiving source test results indicating that SO<sub>2</sub> mass emissions exceed the permit limit. Exceedance of the permit limit shall be a permit violation only if an Authority to Construct application is not received within the 45 day period.

2. Emissions from Landfill Gas Flare No. 2 shall not exceed the following:

**[Basis: SMAQMD Rule 202]**

Pollutant	Emission Factor (A) lb/MMft <sup>3</sup>	Maximum Allowable Emissions (G)				
		Daily	Quarter 1 (90 days) lb/quarter	Quarter 2 (91 Days) lb/quarter	Quarters 3 & 4 (92 days) lb/quarter	Yearly lb/year
ROC	13.7 (A)	78.9	7,102	7,181	7,260	7,260
NO <sub>x</sub>	25 (B)	144.0	12,960	13,104	13,248	13,248
SO <sub>2</sub>	20 (C)	115.2	10,368	10,483	10,598	10,598
PM <sub>10</sub>	7.35 (D)	42.3	3,810	3,853	3,895	3,895
PM <sub>2.5</sub>	7.35 (D)	42.3	3,810	3,853	3,895	3,895
CO	75 (E)	432.0	38,880	39,312	39,744	39,744
GHG (F)	55.06	158.6 ton/day	14,274 ton/qtr	14,433 ton/qtr	14,591 ton/qtr	57,889 ton/year
GHG (F)	0.001	0.003 ton/day	0.3 ton/qtr	0.3 ton/qtr	0.3 ton/qtr	1.2 ton/yr

(A) Emission factor for ROC is based on -

- i. a landfill gas NMOC concentration of 7,857 ppmv (as hexane),  
[established from highest concentration of 17 co-disposal sites, average is 1,849.8 ppm, Reference: Table 3-5, *Air Emissions from Municipal Solid Waste Landfills – Background Information for Proposed Standards and Guidelines*, Office of Air Quality Planning and Standards, Research Triangle Park, U.S. Environmental Protection Agency, EPA-450/3-90-011a, March 1991]
- ii. 39% of total NMOC is ROC,
- iii. MW of NMOC (as hexane) is 86.18 and
- iv. 98% destruction efficiency.

(B) Emission factor for NO<sub>x</sub> is based on permittee's request of 0.05 lb/MMBTU (equivalent to 25 lb/MMft<sup>3</sup> at 500 BTU/ft<sup>3</sup> of LFG).

## V.C. EQUIPMENT SPECIFIC REQUIREMENTS - APC LANDFILL GAS FLARE NO. 2

- (C) Emission factor for SO<sub>2</sub> is based on a SMAQMD BACT determination of 0.04 lb/MMBTU (equivalent to 20 lb/MMft<sup>3</sup> at 500 BTU/ft<sup>3</sup> of LFG).
- (D) Emission factor for PM<sub>10</sub> is based on a SMAQMD BACT determination of 0.0147 lb/MMBTU (equivalent to 7.35 lb/MMft<sup>3</sup> at 500 BTU/ft<sup>3</sup> of LFG). PM<sub>2.5</sub> is assumed to be equal to PM<sub>10</sub>.
- (E) Emission factor for CO based on permittee's request of 0.15 lb/MMBTU (equivalent to 75 lb/MMft<sup>3</sup> at 500 BTU/ft<sup>3</sup> of LFG).
- (F) The potential to emit for GHG is based on the best available CO<sub>2</sub>e emission factor at the time the permit action was taken and the maximum allowed fuel usage rate of 4,000 scfm. Should the emission factor change, the potential to emit will be modified accordingly.

The emission factor for total GHG (55.06 lb/mcf) is based on Appendix A of CARB'S Regulation for the Mandatory Reporting of Greenhouse Gas Emissions (CCR, Title 17, Subchapter 10, Article 2, Sections 95100 TO 95133). It includes combustion byproducts (CH<sub>4</sub>, CO<sub>2</sub> and N<sub>2</sub>O) but it does not include pass-through CO<sub>2</sub> or fugitive GHG emissions.

The emission factor for non-biogenic GHG (0.001 lb/mcf) ) is based on Appendix A of CARB'S Regulation for the Mandatory Reporting of Greenhouse Gas Emissions (CCR, Title 17, Subchapter 10, Article 2, Sections 95100 TO 95133) It includes the non-CO<sub>2</sub> combustion byproducts (CH<sub>4</sub>, and N<sub>2</sub>O) but does not include combustion CO<sub>2</sub> or pass-through CO<sub>2</sub> or fugitive GHG emissions.

- (G) Mass emissions are based on 4,000 ft<sup>3</sup>/min LFG combustion rate, 500 BTU/ft<sup>3</sup> of LFG, 24 hours/day and the number of days in each calendar quarter. Yearly emissions are equal to the cumulative quarterly emissions.

3. A. Combined emissions from the Landfill Gas Air Pollution Control System equipment (5 IC engines and 2 landfill gas flares) shall not exceed the following:

P/O 23112 IC engine No. 1 and  
 P/O 23113 IC engine No. 2 and  
 P/O 23114 IC engine No. 3 and  
 P/O 23115 IC engine No. 4 and  
 P/O 23116 IC engine No. 5 and  
 P/O 23110 Landfill Gas Flare No. 1  
 P/O 23111 Landfill Gas Flare No. 2

Pollutant	Maximum Allowable Emissions (B)				
	Quarter 1 lb/quarter	Quarter 2 lb/quarter	Quarter 3 lb/quarter	Quarter 4 lb/quarter	Annually tons/year
ROC	30,847	31,190	31,511	31,511	62.5
NO <sub>x</sub>	43,151	43,631	44,110	44,110	87.5
SO <sub>2</sub>	44,698	45,195	45,715	45,715	90.7

## V.C. EQUIPMENT SPECIFIC REQUIREMENTS - APC LANDFILL GAS FLARE NO. 2

Pollutant	Maximum Allowable Emissions (B)				
	Quarter 1 lb/quarter	Quarter 2 lb/quarter	Quarter 3 lb/quarter	Quarter 4 lb/quarter	Annually tons/year
PM10	13,350	13,501	13,648	13,648	27.1
CO	219,798	222,258	224,715	224,715	445.7
GHG (A)	85,109.75 ton/qtr	85,109.75 ton/qtr	85,109.75 ton/qtr	85,109.75 ton/qtr	340,439
GHG (A)	6,104.5 ton/qtr	6,104.5 ton/qtr	6,104.5 ton/qtr	6,104.5 ton/qtr	24,418

(A) The potential to emit for GHG is based on the best available emission factors at the time the permit action was taken, the maximum allowed fuel usage rate (10,470 cfm; 5,000 cfm for the flares and 5,470 cfm for the engines), a gas composition of 50% CH<sub>4</sub> and 50% CO<sub>2</sub>, 98% CH<sub>4</sub> control for the flare and a heat content of 500 Btu/scf of landfill gas. Should the emission factors change, the potential to emit will be modified accordingly.

The CO<sub>2</sub> (52.03 kg/MMBtu), CH<sub>4</sub> (0.9 g/MMBtu) and N<sub>2</sub>O (0.1 g/MMBtu) emission factors and global warming potentials used for total GHG calculations are based on Appendix A of CARB'S Regulation for the Mandatory Reporting of Greenhouse Gas Emissions (CCR, Title 17, Subchapter 10, Article 2, Sections 95100 TO 95133). The total GHG emissions include combustion byproducts (CH<sub>4</sub>, CO<sub>2</sub> and N<sub>2</sub>O), pass-through CO<sub>2</sub> and uncontrolled CH<sub>4</sub> emissions, calculated as CO<sub>2</sub>e.

The CH<sub>4</sub> (0.9 g/MMBtu) and N<sub>2</sub>O (0.1 g/MMBtu) emission factors and global warming potentials used for non-biogenic GHG calculations are based on Appendix A of CARB'S Regulation for the Mandatory Reporting of Greenhouse Gas Emissions (CCR, Title 17, Subchapter 10, Article 2, Sections 95100 TO 95133). It includes the non-CO<sub>2</sub> combustion byproducts (CH<sub>4</sub>, and N<sub>2</sub>O) and uncontrolled CH<sub>4</sub> emissions but does not include combustion CO<sub>2</sub> or pass-through CO<sub>2</sub> emissions, calculated as CO<sub>2</sub>e. Biogenic CO<sub>2</sub> emissions are currently deferred.

(B) Quarterly emissions are based on 24 hours/day and the actual number of days in each calendar quarter. Annual emissions are the sum of the quarterly emissions.

B. Combined emissions from the 5 IC engines only (excluding the 2 landfill gas flares) shall not exceed the following:

P/O 23112 IC engine No. 1 and  
 P/O 23113 IC engine No. 2 and  
 P/O 23114 IC engine No. 3 and  
 P/O 23115 IC engine No. 4 and  
 P/O 23116 IC engine No. 5

## **V.C. EQUIPMENT SPECIFIC REQUIREMENTS - APC LANDFILL GAS FLARE NO. 2**

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Pollutant	Maximum Annual Allowable Emissions (A) tons/year
NOx	79.8

(A) The NOx emissions from the five IC engines are limited by the amount of ERCs provided from sources other than the SMAQMD Priority Reserve Bank Essential Public Services Account. The 7.72 tons of NOx ERCs leased from the Essential Public Services Account (see Condition No. 20) are not allowed to be used for on-site power generation by SMAQMD Rule 205 Section 102.1.

**[Basis: SMAQMD Rule 202]**

### **EQUIPMENT OPERATION AND MONITORING REQUIREMENTS**

4. The concentration of sulfur compounds (measured as hydrogen sulfide) in the landfill gas combusted in Landfill Gas Flare No. 2 shall not exceed 16 grains per 100 cubic feet.

**[Basis: SMAQMD Rule 202]**

5. A sampling port, or other method approved by the SMAQMD Air Pollution Control Officer, shall be installed at the inlet gas line to Landfill Gas Flare No. 2. The sampling port shall be located so that an accurate volume flow measurement can be performed.

**[Basis: SMAQMD Rule 202]**

6. Landfill Gas Flare No. 2 exhaust sample ports shall be permanent, accessible and located and constructed as per applicable U.S. EPA, CARB and U.S. OSHA requirements.

**[Basis: SMAQMD Rule 202]**

7. A landfill gas flowrate measuring device that provides a measurement of landfill gas flow to Landfill Gas Flare No. 2 shall be installed, calibrated and maintained.

- A. The landfill gas flowrate measuring device shall record the flow to Landfill Gas Flare No. 2 at least every 15 minutes.

- B. The owner or operator shall submit to the SMAQMD Air Pollution Control Officer for approval a description of the landfill gas flowrate measuring device calibration procedure and schedule of calibration.

**[Basis: SMAQMD Rule 202]**

8. Landfill Gas Flare No. 2 shall be equipped with a temperature monitoring device.

- A. The thermocouple used to measure the flare temperature shall be located at a distance that is greater than the distance equivalent to 0.6 seconds at the maximum flow rate downstream of the burner.

- B. The temperature monitoring device shall be equipped with a continuous recorder.

## **V.C. EQUIPMENT SPECIFIC REQUIREMENTS - APC LANDFILL GAS FLARE NO. 2**

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- C. The temperature monitoring device shall have an accuracy of  $\pm 1$  percent of the temperature being measured expressed in degrees Celsius or  $\pm 0.5$  degrees C, whichever is greater.
- D. The temperature monitoring device is not precluded from expressing measurements in degrees Fahrenheit as long as the aforementioned accuracy is met.
- E. The owner or operator shall submit to the SMAQMD Air Pollution Control Officer for approval a description of the temperature monitoring device calibration procedure and schedule of calibration.

**[Basis: SMAQMD Rule 202]**

- 9. Landfill Gas Flare No. 2 shall operate at a minimum combustion zone temperature equal to the 3-hour average temperature (measured by the thermocouple specified in Condition No. 8) as determined during the most recent complying source test minus 28 degrees C (minus 50 degrees F)

**[Basis: SMAQMD Rule 202]**

(The data from the most recent source test is summarized in Attachment C indicating the 3-hour average temperature measured by the thermocouple in Condition No. 8.)

- 10. The landfill gas condensate injection rate into Landfill Gas Flare No. 2 shall not exceed 4 gallons/minute.

**[Basis: SMAQMD Rule 202]**

## **RECORDKEEPING AND REPORTING REQUIREMENTS**

- 11. The following records shall be continuously maintained on site for the most recent 5 year period, except as noted, and shall be made available to the SMAQMD Air Pollution Control Officer upon request. Quarterly and annual records shall be made available within 30 days of the end of the reporting period.

**[Basis: SMAQMD Rule 202]**

Frequency	Information to be recorded
At all times	<ul style="list-style-type: none"><li>A. The following information measured during the initial performance test shall be maintained for the life of Landfill Gas Flare No. 2. Records of subsequent tests or monitoring shall be maintained for a minimum of 5 years. <b>[Basis: 40 CFR 60.758(b)]</b></li><li>i. Landfill Gas Flare No. 2 average combustion temperature measured at least every 15 minutes and averaged over the same time period as the performance test. <b>[Basis: 40 CFR 60.758(b)(2)(i)]</b></li></ul>

## V.C. EQUIPMENT SPECIFIC REQUIREMENTS - APC LANDFILL GAS FLARE NO. 2

Frequency	Information to be recorded
	<p>ii. The percent reduction of NMOC, determined as specified in 40 CFR 60.752(b)(2)(iii)(B), achieved by Landfill Gas Flare No. 2.  <b>[Basis: 40 CFR 60.758(b)(2)(ii)]</b></p> <p>B. Continuously monitored landfill gas flowrate to Landfill Gas Flare No. 2 as required by Condition No. 7.</p> <p>C. Continuously monitored combustion temperature of Landfill Gas Flare No. 2 as required by Condition No. 8.</p> <p>D. All 3 hour periods of operation during which Landfill Gas Flare No. 2 average combustion temperature was below the limit established in Condition No. 9.  <b>[Basis: 40 CFR 60.758I(1)(i)]</b></p> <p>E. Records of calibration reports for the landfill gas flowrate monitoring device.</p> <p>F. Record of calibration reports for the temperature monitoring device.</p> <p>G. Records of source test plans and results to determine compliance with the emission limits in Condition No. 1 shall be maintained for a minimum of 5 years.</p>
Quarterly	H. Comparison of the actual emissions from the Landfill Gas Air Pollution Control System equipment (5 IC engines and 2 landfill gas flares) with the maximum allowable emissions in Condition No. 3.A. (lb/quarter)
Annually	I. Comparison of the actual emissions from the Landfill Gas Air Pollution Control System equipment (5 IC engines and 2 landfill gas flares) with the maximum allowable emissions in Condition No. 3.A. (tons/year)

12. A written report shall be submitted to the SMAQMD Air Pollution Control Officer annually by the date indicated and shall contain the following information.

**[Basis: SMAQMD Rule 202]**

Frequency	Information to be submitted
Annually by: January 31  for the	<p>A. All 3-hour periods of operation during which Landfill Gas Flare No. 2 average combustion temperature was below the limit established in Condition No. 9.  <b>[Basis: 40 CFR 60.758I(1)(i)]</b></p>

## V.C. EQUIPMENT SPECIFIC REQUIREMENTS - APC LANDFILL GAS FLARE NO. 2

Frequency	Information to be submitted
previous calendar year	B. Description and duration of all periods when the Landfill Gas Air Pollution Control System (5 IC engines and 2 landfill gas flares) was not operating for a period exceeding 1 hour and length of time the Landfill Gas Air Pollution Control System was not operating. <b>[Basis: 40 CFR 60.757(f)(3)]</b>

13. The permittee shall develop and implement a written Startup, Shutdown and Malfunction (SSM) Plan as specified in 40 CFR 63.6(e)

**[Basis: 40 CFR 63.6(e)]**

14. Startup, Shutdown and Malfunction (SSM) Immediate Report

A written SSM Immediate Report shall be submitted to the SMAQMD Air Pollution Control Officer as indicated and shall contain the following information.

**[Basis: 40 CFR 63.1955(b), 40 CFR 63.1980(b), 40 CFR 63.10(d)(5)(ii)]**

Frequency	Information to be submitted
<u>Only required if a SSM event occurred.</u>	A. If actions taken during a SSM event <u>are not consistent</u> with the procedures specified in the SSM Plan, the permittee shall:
Within 2 working days →	i. Report to the SMAQMD Air Pollution Control Officer, by telephone call or facsimile (fax), within 2 working days after commencing actions <u>not consistent</u> with the SSM Plan.
Within 7 working days →	ii. Follow with a letter to the SMAQMD Air Pollution Control Officer within 7 working days after the end of the SSM event that: <ul style="list-style-type: none"> <li>a. Contains the name, title and signature of the responsible official who is certifying the accuracy of the report.</li> <li>b.. Explains the circumstances of the event.</li> <li>c. Explains the reasons for not following the SSM Plan.</li> <li>d. Explains whether any excess emissions and/or parameter monitoring exceedances are</li> </ul>

## V.C. EQUIPMENT SPECIFIC REQUIREMENTS - APC LANDFILL GAS FLARE NO. 2

Frequency	Information to be submitted
	believed to have occurred.

### 15. Startup, Shutdown and Malfunction (SSM) Periodic Report

A written SSM Periodic Report shall be submitted to the SMAQMD Air Pollution Control Officer by the date indicated and shall contain the following information.

**[Basis: 40 CFR 63.1955(b), 40 CFR 63.1980(b), 40 CFR 63.10(d)(5)(i)]**

Frequency	Information to be submitted
<p><u>Only required if a SSM event occurred within a reporting period.</u></p> <p>Submit by –                      January 31                      July 30</p> <p>for the reporting periods –                      January 01 – June 30                      July 01 – December 31</p>	<p>A. If actions taken during a SSM event <u>are consistent</u> with the procedures specified in the SSM Plan, the permittee shall state such information in a SSM Report.</p> <p>B. The SSM Report shall contain:</p> <ul style="list-style-type: none"> <li>i. Number, duration and a brief description of each SSM event.</li> <li>ii. A letter containing the name, title and signature of the responsible official who is certifying the accuracy of the report.</li> </ul>

16. The permittee shall maintain files of all required SSM information specified below (including all reports and notifications), recorded in a form suitable and readily available for expeditious inspection and review. The files shall be retained for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report or record. At a minimum, the most recent 2 years of data shall be retained on site. The remaining 3 years of data may be retained off site. Such files may be maintained on microfilm, on a computer, on computer floppy disks, on magnetic tape disks or on microfiche.

**[Basis: 40 CFR 63.1955(b), 40 CFR 63.1980(b), 40 CFR 63.10(b), 40 CFR 63.10(d)(5)(ii)]**

Frequency	Information to be recorded
At all times	<p>A. The occurrence and duration of each startup, shutdown or malfunction of operation (i.e., process equipment).</p> <p>B. The occurrence and duration of each malfunction of the required air pollution control and monitoring equipment.</p> <p>C. All required maintenance performed on the air pollution control and</p>

## V.C. EQUIPMENT SPECIFIC REQUIREMENTS - APC LANDFILL GAS FLARE NO. 2

Frequency	Information to be recorded
	<p>monitoring equipment.</p> <p>D. Actions taken during periods of startup, shutdown and malfunction (including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation) when such actions are different from the procedures specified in the affected source's SSM Plan.</p> <p>E. All information necessary, including actions taken, to demonstrate conformance with the affected source's startup, shutdown, and malfunction plan when all actions taken during periods of startup or shutdown (and the startup or shutdown causes the source to exceed any applicable emission limitation in the relevant emission standards), and malfunction (including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation) are consistent with the procedures specified in such plan.</p> <p>i. The information needed to demonstrate conformance with the SSM Plan may be recorded using a "checklist" or some other effective form of recordkeeping, in order to minimize the recordkeeping burden for conforming events.</p> <p>F. Each period during which a continuous monitoring system (CMS) is malfunctioning or inoperative (including out-of-control periods).</p> <p>G. All required measurements needed to demonstrate compliance with a relevant standard (including, but not limited to, 15-minute averages of CMS data, raw performance testing measurements, and raw performance evaluation measurements, that support data that the source is required to report).</p> <p>H. All results of performance tests, CMS performance evaluations, and opacity and visible emission observations.</p> <p>I. All measurements as may be necessary to determine the conditions of performance tests and performance evaluations.</p> <p>J. All CMS calibration checks.</p> <p>K. All adjustments and maintenance performed on CMS.</p> <p>L. All documentation supporting initial notifications and notifications of compliance status under 40 CFR 63.9.</p>

## V.C. EQUIPMENT SPECIFIC REQUIREMENTS - APC LANDFILL GAS FLARE NO. 2

Frequency	Information to be recorded
	<p>M. All required CMS measurements (including monitoring data recorded during unavoidable CMS breakdowns and out-of-control periods).</p> <p>N. The date and time identifying each period during which the CMS was inoperative except for zero (low-level) and high-level checks.</p> <p>O. The date and time identifying each period during which the CMS was out of control, as defined in 40 CFR 63.8l(7).</p> <p>P. The specific identification (i.e., the date and time of commencement and completion) of each period of excess emissions and parameter monitoring exceedances, as defined in the relevant standard(s), that occurs during startups, shutdowns, and malfunctions of the affected source.</p> <p>Q. The specific identification (i.e., the date and time of commencement and completion) of each time period of excess emissions and parameter monitoring exceedances, as defined in the relevant standard(s), that occurs during periods other than startups, shutdowns, and malfunctions of the affected source.</p> <p>R. The nature and cause of any malfunction (if known).</p> <p>S. The corrective action taken or preventive measures adopted.</p> <p>T. The nature of the repairs or adjustments to the CMS that was inoperative or out of control.</p> <p>U. The total process operating time during the reporting period.</p> <p>V. All procedures that are part of a quality control program developed and implemented for CMS under 40 CFR 63.8(d).</p>

## **V.C. EQUIPMENT SPECIFIC REQUIREMENTS - APC LANDFILL GAS FLARE NO. 2**

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### **EMISSION REDUCTION CREDIT (ERC) REQUIREMENTS**

#### **17. For SMAQMD Rule 202 New Source Review purposes:**

The permittee shall surrender (and has surrendered – See Condition No. 21) ROC ERCs to the SMAQMD Air Pollution Control Officer to offset the following amount of Landfill Gas Air Pollution Control System ROC emissions:

**[Basis: SMAQMD Rule 202]**

Equipment	Amount of ROC Emissions for which ERCs are to be Provided lb/quarter			
	Quarter 1	Quarter 2	Quarter 3	Quarter 4
Landfill Gas Air Pollution Control System consisting of: 1. P/O 23110 Landfill Gas Flare No. 1 2. P/O 23111 Landfill Gas Flare No. 2 3. P/O 23112 IC engine No. 1 4. P/O 23113 IC engine No. 2 5. P/O 23114 IC engine No. 3 6. P/O 23115 IC engine No. 4 7. P/O 23116 IC engine No. 5	3726	3768	3809	3809

## V.C. EQUIPMENT SPECIFIC REQUIREMENTS - APC LANDFILL GAS FLARE NO. 2

### 18. For SMAQMD Rule 202 New Source Review purposes:

The permittee shall surrender (and has surrendered - See Condition No. 22) NOx ERCs to the SMAQMD Air Pollution Control Officer to offset the following amount of Landfill Gas Air Pollution Control System NOx emissions:

**[Basis: SMAQMD Rule 202]**

Equipment	Amount of NOx Emissions for which ERCs are to be Provided lb/quarter			
	Quarter 1	Quarter 2	Quarter 3	Quarter 4
Landfill Gas Air Pollution Control System consisting of: 1. P/O 23110 Landfill Gas Flare No. 1 2. P/O 23111 Landfill Gas Flare No. 2 3. P/O 23112 IC engine No. 1 4. P/O 23113 IC engine No. 2 5. P/O 23114 IC engine No. 3 6. P/O 23115 IC engine No. 4 7. P/O 23116 IC engine No. 5	20,484	20,711	20,938	20,938

### 19. For U.S. EPA Pollution Control Project purposes:

The permittee shall surrender (and has surrendered - See Condition No. 23) NOx ERCs to the SMAQMD Air Pollution Control Officer to offset the following amount of Landfill Gas Air Pollution Control System NOx emissions:

**[Basis: SMAQMD Rule 202]**

Equipment	Amount of NOx Emissions for which ERCs are to be Provided (A) (B) tons/year
Landfill Gas Air Pollution Control System consisting of: 1. P/O 23110 Landfill Gas Flare No. 1 2. P/O 23111 Landfill Gas Flare No. 2 3. P/O 23112 IC engine No. 1 4. P/O 23113 IC engine No. 2 5. P/O 23114 IC engine No. 3 6. P/O 23115 IC engine No. 4 7. P/O 23116 IC engine No. 5	87.5

(A) The requirement for these ERCs is a result of U.S. EPA's Pollution Control Project offsetting policy:

- i. U.S. EPA excludes the project from Federal New Source Review rules if it qualifies as a Pollution Control Project.

## **V.C. EQUIPMENT SPECIFIC REQUIREMENTS - APC LANDFILL GAS FLARE NO. 2**

- ii. The project qualifies as a Pollution Control Project if it is environmentally beneficial.
  - iii. The project is environmentally beneficial if all NOx emissions from the project are offset.
- (B) The amount of ERCs to be provided is not in addition to the amount specified in Condition No. 21.
20. The permittee shall surrender (and has surrendered - See Condition No. 24) PM10 ERCs to the SMAQMD Air Pollution Control Officer to offset the following amount of Landfill Gas Air Pollution Control System PM10 emissions:  
**[Basis: SMAQMD Rule 202]**

Equipment	Amount of PM10 Emissions for which ERCs are to be Provided lb/quarter			
	Quarter 1	Quarter 2	Quarter 3	Quarter 4
Landfill Gas Air Pollution Control System consisting of: 1. P/O 23110 Landfill Gas Flare No. 1 2. P/O 23111 Landfill Gas Flare No. 2 3. P/O 23112 IC engine No. 1 4. P/O 23113 IC engine No. 2 5. P/O 23114 IC engine No. 3 6. P/O 23115 IC engine No. 4 7. P/O 23116 IC engine No. 5	5,799	5,909	6,016	6,016

21. The following ROC ERCs have been surrendered to the SMAQMD Air Pollution Control Officer to comply with the SMAQMD Rule 202 New Source Review requirement as stated in Condition No. 17:

See Table in Condition No. 21 associated with Landfill Gas Flare No. 1.

22. The following NOx/ROC ERCs have been surrendered to the SMAQMD Air Pollution Control Officer to comply with the SMAQMD Rule 202 New Source Review requirement as stated in Condition No. 18:

**[Basis: SMAQMD Rule 202]**

See Table in Condition No. 22 associated with Landfill Gas Flare No. 1.

23. The following NOx/ROC ERCs have been surrendered to the SMAQMD Air Pollution Control Officer to comply with the U.S. EPA requirement stated in Condition No. 19:

**[Basis: SMAQMD Rule 202]**

## **V.C. EQUIPMENT SPECIFIC REQUIREMENTS - APC LANDFILL GAS FLARE NO. 2**

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See Table in Condition No. 23 associated with Landfill Gas Flare No. 1.

24. The following PM10 ERCs have been surrendered to the SMAQMD Air Pollution Control Officer to comply with the SMAQMD Rule 202 New Source Review requirement as stated in Condition No. 20:

**[Basis: SMAQMD Rule 202]**

See Table in Condition No. 24 associated with Landfill Gas Flare No. 1.

### **EMISSION TESTING REQUIREMENTS**

25. An emission test shall be conducted each calendar year to demonstrate compliance with Condition Nos. 1, 2, 3, 4 and 9:

- A. Submit a Source Test Plan to the SMAQMD Air Pollution Control Officer for approval at least 30 days before the source test is to be performed.
- B. Notify the SMAQMD Air Pollution Control Officer at least 7 days prior to the source test date if the date has changed from that approved in the Source Test Plan.
- C. Submit the Source Test Results Report to the SMAQMD Air Pollution Control Officer within 60 days from the completion of the source test.
- D. The source test shall be conducted at the exhaust of the landfill gas flare (except for hydrogen sulfide test which shall use the inlet) and shall include a test for:
  - i. Either:
    - a. NMOC destruction efficiency, or
    - b. Total NMOC (ppmvd at 3% O<sub>2</sub> measured as hexane)
  - ii. Nitrogen oxides, NO<sub>x</sub>
  - iii. Carbon monoxide, CO
  - iv. Particulate Matter, PM<sub>10</sub>
  - v. Hydrogen sulfide, H<sub>2</sub>S (inlet)
  - vi. Combustion temperature (as measured by the thermocouple required by Condition No. 8)
  - vii. Landfill gas flow rate
- E. The SMAQMD Air Pollution Control Officer may waive the annual source test requirement for PM<sub>10</sub> if, in the SMAQMD Air Pollution Control Officer's sole judgment,

## **V.C. EQUIPMENT SPECIFIC REQUIREMENTS - APC LANDFILL GAS FLARE NO. 2**

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previous source test results indicate that an adequate compliance margin has been maintained.

- F. Compliance with the NO<sub>x</sub> emission limit shall be determined using one of the following source test methods:
- i. CARB Method 100;
  - ii. U.S. EPA Method 7E; or
  - iii. Any other method approved by the U.S. Environmental Protection Agency and the SMAQMD Air Pollution Control Officer.

**[Basis: SMAQMD Rule 202]**

### **RACT DETERMINATION REQUIREMENTS**

26. This permit incorporates a Reasonably Available Control Technology (RACT) determination as required by the federal Clean Air Act (as amended 1990) Sections 182(b)(2) and 182(f).  
**[Basis: SMAQMD Rule 202 and 40 CFR 52.220(c)(382)(i)(A)(1)]**

27. For federal enforcement purposes the RACT provisions of this permit that are approved by the U.S. Environmental Protection Agency shall remain in effect as part of the State of California Implementation Plan (SIP) until replaced pursuant to 40 CFR 51 and approved by the U.S. EPA.

**[Basis: SMAQMD Rule 202 and 40 CFR 52.220(c)(382)(i)(A)(1)]**

**V.C. EQUIPMENT SPECIFIC REQUIREMENTS - APC LANDFILL GAS FLARE NO. 2**

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**ATTACHMENT C**

Actual Flare Combustion Temperature Observed  
During the Most Recent Landfill Gas Flare No. 2 Source Test

Date of Test	Actual 3-Hour Average Flare Combustion Temperature Observed During Source Test degrees F	Minimum 3-Hour Flare Combustion Temperature to Demonstrate Continuous Compliance degrees F
02-18-2010	1500	1450
Historical Data ↓		

**[Basis: SMAQMD Rule 202]**

**V.D. EQUIPMENT SPECIFIC REQUIREMENTS - (5) IC ENGINES, LANDFILL GAS CONTROL AND PRIME POWER, DRIVING ELECTRICAL GENERATORS**

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**A. EQUIPMENT DESCRIPTION:** The information specified under this section is enforceable by the SMAQMD, U.S. EPA and the public.

The requirements specified under the following sections apply to the following equipment:

**IC Engine No. 1, Prime Power**

P/O No. 23112  
Manufacturer: Caterpillar  
Model: G3616  
Serial No.: 4CG122  
Horsepower: 4,230 hp at 900 rpm  
Fuel: Landfill gas  
Driving: Electrical generator, 3.05MW

**IC Engine No. 2, Prime Power**

P/O No. 23113  
Manufacturer: Caterpillar  
Model: G3616  
Serial No.: 4CG123  
Horsepower: 4,230 hp at 900 rpm  
Fuel: Landfill gas  
Driving: Electrical generator, 3.05MW

**IC Engine No. 3, Prime Power**

P/O No. 23114  
Manufacturer: Caterpillar  
Model: G3616  
Serial No.: 4CG124  
Horsepower: 4,230 hp at 900 rpm  
Fuel: Landfill gas  
Driving: Electrical generator, 3.05MW

**IC Engine No. 4, Prime Power**

P/O No. 23115  
Manufacturer: Caterpillar  
Model: G3616  
Serial No.: BLB00258  
Horsepower: 4,230 hp at 900 rpm  
Fuel: Landfill gas  
Driving: Electrical generator, 3.05MW

**V.D. EQUIPMENT SPECIFIC REQUIREMENTS - (5) IC ENGINES, LANDFILL GAS CONTROL AND PRIME POWER, DRIVING ELECTRICAL GENERATORS**

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**IC Engine No. 5, Prime Power**

P/O No. 23116

Manufacturer: Caterpillar

Model: G3616

Serial No.: BLB00259

Horsepower: 4,230 hp at 900 rpm

Fuel: Landfill gas

Driving: Electrical generator, 3.05MW

**B. EQUIPMENT SPECIFIC FEDERALLY ENFORCEABLE REQUIREMENTS:** The requirements specified under this section are enforceable by the SMAQMD, U.S. EPA and the public.

**EMISSION LIMITS:**

1. Emissions from each IC engine shall not exceed the following limits:

P/O 23112 IC engine No. 1 or

P/O 23113 IC engine No. 2 or

P/O 23114 IC engine No. 3 or

P/O 23115 IC engine No. 4 or

P/O 23116 IC engine No. 5

Pollutant	Maximum Allowable Emission
ROC (A)	A. 0.17 grams/hp-hour
NOx (B)	B. <b><u>During periods that contain no short-term excursions:</u></b> (D)  i. 0.40 grams/hp-hour, any consecutive 3 hour average, or ii. 30.0 ppmvd at 15% O <sub>2</sub> , any consecutive 3 hour average.  C. <b><u>During periods that contain short-term excursions:</u></b> (D)  i. 0.60 grams/hp-hour, any consecutive 3 hour average, or ii. 45.0 ppmvd at 15% O <sub>2</sub> , any consecutive 3 hour average.
SO <sub>2</sub> (C)	D. 0.29 grams/hp-hour
PM <sub>10</sub> (C)	E. 0.113 grams/hp-hour

**V.D. EQUIPMENT SPECIFIC REQUIREMENTS - (5) IC ENGINES, LANDFILL GAS CONTROL AND PRIME POWER, DRIVING ELECTRICAL GENERATORS**

Pollutant	Maximum Allowable Emission
CO (B)	<p>F. <b><u>During periods that contain no short-term excursions:</u></b> (D)</p> <p>i. 2.55 grams/hp-hour, any consecutive 3 hour average, or</p> <p>ii. 366 ppmvd at 15% O<sub>2</sub>, any consecutive 3 hour average.</p> <p>G. <b><u>During periods that contain short-term excursions:</u></b> (D)</p> <p>i. 3.48 grams/hp-hour, any consecutive 3 hour average, or</p> <p>ii. 500 ppmvd at 15% O<sub>2</sub>, any consecutive 3 hour average.</p>

(A) The previous ROC limit is superseded by this permittee requested emission limit

(B) SMAQMD BACT determination.

(C) The previous SMAQMD BACT determination is superseded by this more restrictive permittee requested emission limit.

(D) Short-term excursion is defined as any period, designated by the permittee, that is the direct result of non-uniform density or non-uniform heating value of the landfill gas fuel, when the consecutive 3 hour average NO<sub>x</sub> concentration exceeds 30.0 ppmvd at 15% O<sub>2</sub> (0.4 grams/hp-hour) or the consecutive 3 hour average CO concentration exceeds 366 ppmvd at 15% O<sub>2</sub> (2.55 grams/hp-hour).

2. The number of periods containing short-term excursions for NO<sub>x</sub> and CO shall not exceed the following:

Pollutant	Maximum Allowable Number of Periods (A) Containing Short-Term Excursions (B) (periods/quarter)
NO <sub>x</sub>	20
CO	10

(A) A period is defined as each consecutive 3 hour average.

(B) Short-term excursion is defined in Condition No. 1(D).

## V.D. EQUIPMENT SPECIFIC REQUIREMENTS - (5) IC ENGINES, LANDFILL GAS CONTROL AND PRIME POWER, DRIVING ELECTRICAL GENERATORS

3. Emissions from each IC engine shall not exceed the following limits:

**[Basis: SMAQMD Rule 202]**

P/O 23112 IC engine No. 1 or  
 P/O 23113 IC engine No. 2 or  
 P/O 23114 IC engine No. 3 or  
 P/O 23115 IC engine No. 4 or  
 P/O 23116 IC engine No. 5

Pollutant	Emission Factor grams/hp-hour	Maximum Allowable Emissions (E)					
		Daily  lb/day	Quarter 1 (90 days)  lb/qtr	Quarter 2 (91 days)  lb/qtr	Quarter 3 (92 days)  lb/qtr	Quarter 4 (92 days)  lb/qtr	Yearly  lb/year
ROC	0.17 (A)	38.0	3424	3462	3500	3500	13,886
NOx	0.40 (B)	89.5	8057	8147	8236	8236	32,676
SO2	0.29 (C)	64.9	5841	5906	5971	5971	23,689
PM10	0.113 (D)	25.3	2276	2301	2327	2327	9,231
PM2.5	0.113 (D)	25.3	2276	2301	2327	2327	9,231
CO	2.55 (B)	570.7	51364	51935	52506	52506	208,311
GHG (F)	55.06 lb/Mcf	43.4 (F) ton/day	3,906 (F) ton/qtr	3,949 (F) ton/qtr	3,993 (F) ton/qtr	3,993 (F) ton/qtr	15,841 (F) ton/yr
GHG (F)	0.001 lb/Mcf	0.0008 ton/day	0.1 ton/qtr	0.1 ton/qtr	0.1 ton/qtr	0.1 ton/qtr	0.4 ton/yr

- (A) Emission factor for ROC is a value requested by the permittee.  
 (B) Emission factors for NOx and CO are SMAQMD BACT determinations.  
 (C) Emission factor for SO2 is a value requested by the permittee and is 95% of the previous SMAQMD BACT determination.  
 (D) Emission factor for PM10 is a value requested by the permittee and is 95% of the previous SMAQMD BACT determination.  
 (E) Maximum Allowable Emissions are based on 4,230 hp, 24 hours/day and the number of days in each calendar quarter. Yearly emissions are equal to the cumulative quarterly emissions.  
 (F) The potential to emit for GHG is based on the best available CO<sub>2</sub>e emission factor at the time the permit action was taken and a fuel usage rate of 1,094 scfm. Should the

## **V.D. EQUIPMENT SPECIFIC REQUIREMENTS - (5) IC ENGINES, LANDFILL GAS CONTROL AND PRIME POWER, DRIVING ELECTRICAL GENERATORS**

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emission factor change, the potential to emit will be modified accordingly.

The emission factor for total GHG (55.06 lb/mcf) is based on Appendix A of CARB'S Regulation for the Mandatory Reporting of Greenhouse Gas Emissions (CCR, Title 17, Subchapter 10, Article 2, Sections 95100 TO 95133). It includes combustion byproducts (CH<sub>4</sub>, CO<sub>2</sub> and N<sub>2</sub>O) but it does not include pass-through CO<sub>2</sub> or fugitive GHG emissions.

The emission factor for non-biogenic GHG (0.001 lb/mcf) ) is based on Appendix A of CARB'S Regulation for the Mandatory Reporting of Greenhouse Gas Emissions (CCR, Title 17, Subchapter 10, Article 2, Sections 95100 TO 95133) It includes the non-CO<sub>2</sub> combustion byproducts (CH<sub>4</sub>, and N<sub>2</sub>O) but does not include combustion CO<sub>2</sub> or pass-through CO<sub>2</sub> or fugitive GHG emissions.

4. Combined emissions from the Landfill Gas Air Pollution Control System equipment (5 IC engines and 2 landfill gas flares) shall not exceed the following:

**[Basis: SMAQMD Rule 202]**

P/O 23110 Landfill Gas Flare No. 1 and  
P/O 23111 Landfill Gas Flare No. 2 and  
P/O 23112 IC engine No. 1 and  
P/O 23113 IC engine No. 2 and  
P/O 23114 IC engine No. 3 and  
P/O 23115 IC engine No. 4 and  
P/O 23116 IC engine No. 5

Pollutant	Maximum Allowable Emissions (B)				
	Quarter 1 lb/quarter	Quarter 2 lb/quarter	Quarter 3 lb/quarter	Quarter 4 lb/quarter	Annually tons/year
ROC	34,573	34,958	35,320	35,320	70.1
NOx	43,151	43,631	44,110	44,110	87.5
SO2	44,698	45,195	45,715	45,715	90.7
PM10	13,350	13,501	13,648	13,648	27.1
CO	219,798	222,258	224,715	224,715	445.7
GHG (A)	85,109.75 ton/qtr	85,109.75 ton/qtr	85,109.75 ton/qtr	85,109.75 ton/qtr	340,439

**V.D. EQUIPMENT SPECIFIC REQUIREMENTS - (5) IC ENGINES, LANDFILL GAS CONTROL AND PRIME POWER, DRIVING ELECTRICAL GENERATORS**

Pollutant	Maximum Allowable Emissions (B)				
	Quarter 1 lb/quarter	Quarter 2 lb/quarter	Quarter 3 lb/quarter	Quarter 4 lb/quarter	Annually tons/year
GHG (A)	6,104.5 ton/qtr	6,104.5 ton/qtr	6,104.5 ton/qtr	6,104.5 ton/qtr	24,418

(A) The potential to emit for GHG is based on the best available emission factors at the time the permit action was taken, the maximum allowed fuel usage rate (10,470 cfm; 5,000 cfm for the flares and 5,470 cfm for the engines), a gas composition of 50% CH<sub>4</sub> and 50% CO<sub>2</sub>, 98% CH<sub>4</sub> control for the flare and a heat content of 500 Btu/scf of landfill gas. Should the emission factors change, the potential to emit will be modified accordingly.

The CO<sub>2</sub> (52.03 kg/MMBtu), CH<sub>4</sub> (0.9 g/MMBtu) and N<sub>2</sub>O (0.1 g/MMBtu) emission factors and global warming potentials used for total GHG calculations are based on Appendix A of CARB'S Regulation for the Mandatory Reporting of Greenhouse Gas Emissions (CCR, Title 17, Subchapter 10, Article 2, Sections 95100 TO 95133). The total GHG emissions include combustion byproducts (CH<sub>4</sub>, CO<sub>2</sub> and N<sub>2</sub>O), pass-through CO<sub>2</sub> and uncontrolled CH<sub>4</sub> emissions, calculated as CO<sub>2</sub>e.

The CH<sub>4</sub> (0.9 g/MMBtu) and N<sub>2</sub>O (0.1 g/MMBtu) emission factors and global warming potentials used for non-biogenic GHG calculations are based on Appendix A of CARB'S Regulation for the Mandatory Reporting of Greenhouse Gas Emissions (CCR, Title 17, Subchapter 10, Article 2, Sections 95100 TO 95133). It includes the non-CO<sub>2</sub> combustion byproducts (CH<sub>4</sub>, and N<sub>2</sub>O) and uncontrolled CH<sub>4</sub> emissions but does not include combustion CO<sub>2</sub> or pass-through CO<sub>2</sub> emissions, calculated as CO<sub>2</sub>e. Biogenic CO<sub>2</sub> emissions are currently deferred.

(B) Quarterly emissions are based on 24 hours/day and the actual number of days in each calendar quarter. Annual emissions are the sum of the quarterly emissions.

5. Combined emissions from the 5 IC engines only (excluding the 2 landfill gas flares) shall not exceed the following:

**[Basis: SMAQMD Rule 202]**

P/O 23112 IC engine No. 1 and  
 P/O 23113 IC engine No. 2 and  
 P/O 23114 IC engine No. 3 and  
 P/O 23115 IC engine No. 4 and  
 P/O 23116 IC engine No. 5

**V.D. EQUIPMENT SPECIFIC REQUIREMENTS - (5) IC ENGINES, LANDFILL GAS CONTROL AND PRIME POWER, DRIVING ELECTRICAL GENERATORS**

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Pollutant	Maximum Annual Allowable Emissions (A) tons/year
NOx	79.8

(A) The NOx emissions from the five IC engines are limited by the amount of ERCs provided from sources other than the SMAQMD Priority Reserve Bank Essential Public Services Account. The 7.72 tons of NOx ERCs leased from the Essential Public Services Account (see Condition No. 15) are not allowed to be used for on-site power generation by SMAQMD Rule 205 Section 102.1.

**EQUIPMENT OPERATION AND MONITORING REQUIREMENT**

6. Only landfill gas shall be combusted by IC Engines Nos. 1, 2, 3, 4 and 5.  
**[Basis: SMAQMD Rule 202]**
7. Landfill gas combusted by the IC engines must be routed through a treatment system.
  - A. Treatment system, as interpreted by U.S. EPA, consists of:
    - i. filtering through a 10 micron filter, and
    - ii. compression, and
    - iii. dewatering.
  - B. Approval of the Kiefer Landfill treatment system is contained in the 04-22-2004 letter from Douglas McDaniel, Acting Chief, Air Enforcement, U.S. EPA Region 9 to Gregory Gratz, Derenzo and Associates, on behalf of Kiefer Landfill.  
**[Basis: SMAQMD Rule 202]**
8. The sulfur content of the landfill gas combusted in each engine shall not exceed 16 grains per 100 scf measured as hydrogen sulfide.  
**[Basis: SMAQMD Rule 202]**
9. A sampling port, or other method approved by the SMAQMD Air Pollution Control Officer, shall be installed at the inlet landfill gas line to the IC engines.
  - A. The sampling port shall be located so that an accurate volume flow measurement can be performed.  
**[Basis: SMAQMD Rule 202]**
10. The IC engine exhaust stack sample ports shall be permanent, accessible and located and constructed as per applicable U.S. EPA, CARB and U.S. OSHA requirements.  
**[Basis: SMAQMD Rule 202]**

**V.D. EQUIPMENT SPECIFIC REQUIREMENTS - (5) IC ENGINES, LANDFILL GAS CONTROL AND PRIME POWER, DRIVING ELECTRICAL GENERATORS**

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11. Each IC engine shall be equipped with a non-resetting totalizing hour meter.

**[Basis: SMAQMD Rule 202]**

12. An in-stack continuous emission monitoring system (CEMS), that has been approved by the SMAQMD Air Pollution Control Officer, shall be installed, operated and maintained in each IC engine exhaust stack.

A. The CEMS shall monitor and record the concentration of nitrogen oxides, carbon monoxide and oxygen.

B. The CEMS shall be installed and operated in compliance with the U.S. EPA Monitoring Requirements specified in 40 CFR 60.13.

C. The CEMS shall comply with the U.S. EPA Performance Specifications specified in 40 CFR 60 Appendix B, Performance Specifications 2, 3 and 4 (if CO 0-100 ppm) and 4a (if CO 0-200 ppm).

D. The CEMS shall comply with the U.S. EPA Quality Assurance Procedures specified in 40 CFR 60 Appendix F.

E. The DAS shall have the capability of expressing the measured NO<sub>x</sub> and CO emissions in terms of parts per million by volume dry (ppmvd) corrected to 15% O<sub>2</sub>.

F. The DAS shall record NO<sub>x</sub> and CO emissions in the engineering units defined by the Permit to Operate.

G. The DAS shall record all data in compliance with U.S. EPA Quality Assurance Procedures specified in 40 CFR 60 Appendix F.

H. The CEMS and DAS shall monitor and collect a minimum of data as follows:

i. Obtain at least two data points per hour in order to calculate a valid 1-hour arithmetic average. 40 CFR 60.13(e)(2) requires CEMS to complete at least one cycle of operation (sampling, analyzing and data recording) for each 15-minute period.

ii. Obtain valid 1-hour averages for 95 percent of the annual operating hours. An operating hour is any hour the IC engine combusts any landfill gas fuel.

**[Basis: SMAQMD Rule 202]**

**RECORDKEEPING AND REPORTING REQUIREMENTS**

13. The following records shall be continuously maintained onsite for the most recent five year period and shall be made available to the SMAQMD Air Pollution Control Officer upon

**V.D. EQUIPMENT SPECIFIC REQUIREMENTS - (5) IC ENGINES, LANDFILL GAS CONTROL AND PRIME POWER, DRIVING ELECTRICAL GENERATORS**

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request. Quarterly and yearly records shall be made available for inspection within 30 days of the end of the previous reporting period.

**[Basis: SMAQMD Rule 202]**

Frequency	Information to be recorded
At all times	<p>A. Permit number of each IC engine</p> <p>B. Manufacturer, model number and rating in horsepower of each IC engine.</p> <p>C. Continuously monitored NO<sub>x</sub>, CO and O<sub>2</sub> emission concentrations for each IC engine as required by Condition No. 12.</p> <p>D. Most recent source test report.</p>
Upon Occurrence	<p>E. Whenever a period containing a NO<sub>x</sub> or CO short-term excursion occurs (as defined in Condition No. 1(D)):</p> <p>i. The date and time of the period containing the NO<sub>x</sub> or CO short-term excursion.</p> <p>ii. The monitored NO<sub>x</sub> concentration during the period containing the NO<sub>x</sub> short-term excursion.</p> <p>iii. The monitored CO concentration during the period containing the CO short-term excursion.</p>
Quarterly	<p>F. Comparison of the actual emissions from the Landfill Gas Air Pollution Control System equipment (5 IC engines and 2 LFG flares) with the maximum allowable emissions in Condition No. 4. (lb/quarter)</p> <p>G. Number of periods that contain a short-term NO<sub>x</sub> excursion.</p> <p>H. Number of periods that contain a short-term CO excursion.</p>

**V.D. EQUIPMENT SPECIFIC REQUIREMENTS - (5) IC ENGINES, LANDFILL GAS CONTROL AND PRIME POWER, DRIVING ELECTRICAL GENERATORS**

Frequency	Information to be recorded
Yearly	<p>I. Comparison of the actual emissions from the Landfill Gas Air Pollution Control System equipment (5 IC engines and 2 LFG flares) with the maximum allowable emissions in Condition No. 4. (tons/year)</p> <p>J. Comparison of the actual emissions from the 5 IC engines only (excluding the 2 LFG flares) with the maximum allowable emissions in Condition No. 5. (tons/year)</p>

**EMISSION REDUCTION CREDIT (ERC) REQUIREMENTS**

**14. For SMAQMD Rule 202 New Source Review purposes:**

The permittee shall surrender (and has surrendered - See Condition No. 18) ROC ERCs to the SMAQMD Air Pollution Control Officer to offset the following amount of Landfill Gas Air Pollution Control System ROC emissions:

**[Basis: SMAQMD Rule 202]**

Equipment	Amount of ROC Emissions for which ERCs are to be Provided lb/quarter			
	Quarter 1	Quarter 2	Quarter 3	Quarter 4
Landfill Gas Air Pollution Control system consisting of: 1. P/O 23110 Landfill Gas Flare No. 1 2. P/O 23111 Landfill Gas Flare No. 2 3. P/O 23112 IC engine No. 1 4. P/O 23113 IC engine No. 2 5. P/O 23114 IC engine No. 3 6. P/O 23115 IC engine No. 4 7. P/O 23116 IC engine No. 5	3726	3768	3809	3809

**15. For SMAQMD Rule 202 New Source Review purposes:**

The permittee shall surrender (and has surrendered - See Condition No. 19) NOx ERCs to the SMAQMD Air Pollution Control Officer to offset the following amount of Landfill Gas Air Pollution Control System NOx emissions:

**V.D. EQUIPMENT SPECIFIC REQUIREMENTS - (5) IC ENGINES, LANDFILL GAS CONTROL AND PRIME POWER, DRIVING ELECTRICAL GENERATORS**

**[Basis: SMAQMD Rule 202]**

Equipment	Amount of NOx Emissions for which ERCs are to be Provided lb/quarter			
	Quarter 1	Quarter 2	Quarter 3	Quarter 4
Landfill Gas Air Pollution Control system consisting of: 1. P/O 23110 Landfill Gas Flare No. 1 2. P/O 23111 Landfill Gas Flare No. 2 3. P/O 23112 IC engine No. 1 4. P/O 23113 IC engine No. 2 5. P/O 23114 IC engine No. 3 6. P/O 23115 IC engine No. 4 7. P/O 23116 IC engine No. 5	20,484	20,711	20,938	20,938

**16. For U.S. EPA Pollution Control Project purposes:**

The permittee shall surrender (and has surrendered - See Condition No. 20) NOx ERCs to the SMAQMD Air Pollution Control Officer to offset the following amount of Landfill Gas Air Pollution Control System NOx emissions:

**[Basis: SMAQMD Rule 202]**

Equipment	Amount of NOx Emissions for which ERCs are to be Provided (A) (B) tons/year
Landfill Gas Air Pollution Control system consisting of: 1. P/O 23110 Landfill Gas Flare No. 1 2. P/O 23111 Landfill Gas Flare No. 2 3. P/O 23112 IC engine No. 1 4. P/O 23113 IC engine No. 2 5. P/O 23114 IC engine No. 3 6. P/O 23115 IC engine No. 4 7. P/O 23116 IC engine No. 5	87.5

(A) The requirement for these ERCs is a result of U.S. EPA's Pollution Control Project offsetting policy:

- i. U.S. EPA excludes the project from Federal New Source Review rules if it qualifies as a Pollution Control Project.

**V.D. EQUIPMENT SPECIFIC REQUIREMENTS - (5) IC ENGINES, LANDFILL GAS CONTROL AND PRIME POWER, DRIVING ELECTRICAL GENERATORS**

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- ii. The project qualifies as a Pollution Control Project if it is environmentally beneficial.
  - iii. The project is environmentally beneficial if all NOx emissions from the project are offset.
- (B) The amount of ERCs to be provided is not in addition to the amount specified in Condition No. 15.

17. The permittee shall surrender (and has surrendered - See Condition No. 21) PM10 ERCs to the SMAQMD Air Pollution Control Officer to offset the following amount of Landfill Gas Air Pollution Control System PM10 emissions:  
**[Basis: SMAQMD Rule 202]**

Equipment	Amount of PM10 Emissions for which ERCs are to be Provided lb/quarter			
	Quarter 1	Quarter 2	Quarter 3	Quarter 4
Landfill Gas Air Pollution Control system consisting of: 1. P/O 23110 Landfill Gas Flare No. 1 2. P/O 23111 Landfill Gas Flare No. 2 3. P/O 23112 IC engine No. 1 4. P/O 23113 IC engine No. 2 5. P/O 23114 IC engine No. 3 6. P/O 23115 IC engine No. 4 7. P/O 23116 IC engine No. 5	5,799	5,909	6,016	6,016

18. The following ROC ERCs have been surrendered to the SMAQMD Air Pollution Control Officer to comply with the SMAQMD Rule 202 New Source Review requirement as stated in Condition No. 14:

See Table in Condition No. 21 associated with Landfill Gas Flare No. 1.

19. The following NOx/ROC ERCs have been surrendered to the SMAQMD Air Pollution Control Officer to comply with the SMAQMD Rule 202 New Source Review requirement as stated in Condition No. 15:

**[Basis: SMAQMD Rule 202]**

See Table in Condition No. 22 associated with Landfill Gas Flare No. 1.

**V.D. EQUIPMENT SPECIFIC REQUIREMENTS - (5) IC ENGINES, LANDFILL GAS CONTROL AND PRIME POWER, DRIVING ELECTRICAL GENERATORS**

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20. The following NOx/ROC ERCs have been surrendered to the SMAQMD Air Pollution Control Officer to comply with the U.S. EPA requirement stated in Condition No. 16:  
**[Basis: SMAQMD Rule 202]**

See Table in Condition No. 23 associated with Landfill Gas Flare No. 1.

21. The following PM10 ERCs have been surrendered to the SMAQMD Air Pollution Control Officer to comply with the SMAQMD Rule 202 New Source Review requirement as stated in Condition No. 17:  
**[Basis: SMAQMD Rule 202]**

See Table in Condition No. 24 associated with Landfill Gas Flare No. 1.

**EMISSION TESTING REQUIREMENTS:**

22. An emission test shall be conducted each calendar year to demonstrate compliance with Condition Nos. 1, 3, 4, 5 and 8:
- A. Submit a Source Test Plan to the SMAQMD Air Pollution Control Officer for approval at least 30 days before the source test is to be performed.
  - B. Notify the SMAQMD Air Pollution Control Officer at least 7 days prior to the source test date if the date has changed from that approved in the Source Test Plan.
  - C. Submit the Source Test Report to the SMAQMD Air Pollution Control Officer within 60 days from the completion of the source test.
  - D. Each IC engine shall be operated at full load (>90%) during the source test.
  - E. The source test shall be conducted at the exhaust of each IC engine (except for hydrogen sulfide test which shall use the fuel inlet) and shall include a test for:
    - i. Reactive organic compounds, ROC
    - ii. Nitrogen oxides, NOx
    - iii. Carbon monoxide, CO
    - iv. Particulate Matter less than 10um, PM10
    - v. Hydrogen sulfide, H2S, (fuel inlet)
  - F. A Relative Accuracy Test of the Continuous Emissions Monitoring System, as specified

**V.D. EQUIPMENT SPECIFIC REQUIREMENTS - (5) IC ENGINES, LANDFILL GAS  
CONTROL AND PRIME POWER,  
DRIVING ELECTRICAL  
GENERATORS**

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in Condition No. 12.B, shall be performed at the time of the yearly emissions test.

- G. The SMAQMD Air Pollution Control Officer may waive the annual source test requirement for up to two years and for up to two of the five IC engines if, in the SMAQMD Air Pollution Control Officer's sole judgment, three consecutive source test results indicate that an adequate compliance margin has been maintained.
- i. If there is a subsequent exceedance of the emission limits during a source test, the frequency of testing for all five IC engines shall return to annually.
  - ii. In no case shall an IC engine operate more than 8,760 hours or 5 years without a source test as required by SMAQMD Rule 412 Stationary Internal Combustion Engines Located at Major Stationary Sources of NO<sub>x</sub>, Section 402 Source Testing Frequency (NO<sub>x</sub>, CO and NMHC).

**[Basis: SMAQMD Rule 202]**

## V.E. EQUIPMENT SPECIFIC REQUIREMENTS - GASOLINE DISPENSING FACILITY

- A. EQUIPMENT DESCRIPTION:** The information specified under this section is enforceable by the SMAQMD, U.S. EPA and the public.

The requirements specified under the following sections apply to the following equipment:

### Gasoline Dispensing Facility

P/O No.: 20266

Phase I Equipment		Phase II Equipment	
Number of and Capacity of Tanks	Phase I Type	Number of Nozzles	Phase II Type
(1) 2,500 gallon (aboveground)	Two Point	1	Balance

- B. EQUIPMENT SPECIFIC FEDERALLY ENFORCEABLE REQUIREMENTS:** The requirements specified under this section are enforceable by the SMAQMD, U.S. EPA and the public.

### EMISSION LIMIT REQUIREMENTS

1. Emissions from the gasoline dispensing facility shall not exceed the following limits:  
[Basis: SMAQMD Rule 202]

Pollutant	Emission Factor (A) lb/1000 gallons throughput	Maximum Allowable Emissions (B) lb/quarter
ROC	1.52	46

(A) Emission factor for ROC from *Gasoline Service Station Industrywide Risk Assessment Guidelines*, California Air Pollution Control Officer's Association (CAPCOA), December 1997, Appendix A, Scenario 3B.

(B) Based on a maximum gasoline throughput of 30,000 gallons/quarter.

### EQUIPMENT OPERATION AND MONITORING REQUIREMENTS

2. The gasoline dispensing facility throughput shall not exceed the following limit:  
[Basis: SMAQMD Rule 202]

Equipment	Maximum Allowable Gasoline Throughput gallons/calendar quarter
Gasoline Dispensing Facility	30,000

## **V.E. EQUIPMENT SPECIFIC REQUIREMENTS - GASOLINE DISPENSING FACILITY**

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3. The gasoline dispensing facility shall be maintained, and operated in accordance with the following California Air Resources Board (CARB) Executive Orders. Section 41954(f) of the California Health and Safety Code prohibits the installation of any vapor control system unless the system has been certified by the state board.

**[Basis: SMAQMD Rule 448 and Rule 449]**

Number	Description
G-70-116	Convault Aboveground Gasoline Tank with Phase I and II Vapor Recovery

4. Any person(s) engaged in the installation, alteration, repair, or replacement of a vapor recovery system or its components shall meet the following requirements.

A. Are certified by the International Code Council (ICC) for vapor recovery system testing and repair.

B. If required by the CARB Executive Order, be certified by the system manufacturer.

C. Maintain and make available any and all certifications as required in paragraph a and b.

**[Basis: SMAQMD Rule 448 and Rule 449]**

5. The requirements of Condition No. 4 shall not apply to the owner/operator of a gasoline dispensing facility or his/her direct employee(s) when replacing any defective nozzles, hoses and breakaways with new or carb certified re-manufactured components of the same make and model, or alternatives specifically identified in the latest applicable CARB Executive Order. Any replacement allowed under this condition must be performed in accordance with the applicable CARB Executive Order.

**[Basis: SMAQMD Rule 448 and Rule 449]**

6. The vapor recovery system shall be operated in accordance with the applicable CARB Certification, the manufacturer's specification and maintained to be leak-free, vapor tight and in good working order.

**[Basis: SMAQMD Rule 448 and Rule 449]**

7. All vapor recovery system equipment shall be operated and maintained without any of the applicable defects listed in the Vapor Recovery Equipment Defects (VRED) list (California Administrative Code Title 17, Part III, Chapter 1, Subchapter 8, Section 94006).

**[Basis: SMAQMD Rule 448 and Rule 449]**

8. The owner/operator of a vapor recovery system shall have available an Operation and Maintenance manual. The manual shall be kept on-site and made available to any person who operates, inspects, maintains, repairs or test the vapor recovery equipment as well as the SMAQMD Air Pollution Control Officer upon request. The manual shall, at a minimum, include the following current information:

A. All applicable CARB Executive Orders, approval letters and SMAQMD permits.

## **V.E. EQUIPMENT SPECIFIC REQUIREMENTS - GASOLINE DISPENSING FACILITY**

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- B. Manufacturer's manual(s) for installation, operation and maintenance procedures as required to be provided by CARB Certification Procedure CP-201 and any additional instruction provided by the manufacturer.
  - C. System and/or component testing requirements, including test schedules and passing criteria for each of the standard tests listed in SMAQMD Rules 448 and 449.
  - D. Protocol for performing daily maintenance inspections, including the components to be inspected and the defects requiring repair.  
**[Basis: SMAQMD Rule 448 and Rule 449]**
9. The owner/operator of a gasoline dispensing facility shall, at a minimum, verify the following on each day that fuel is delivered:
- A. The spill container is clean and does not contain gasoline. The spill containment drain valve is seating properly.
  - B. The fill caps and gaskets are not missing, damaged or loose.
  - C. The spring-loaded submerged fill pipe seals properly against the coaxial fitting.
  - D. The dry break (poppet valve) is not missing or damaged.
  - E. The submerged fill pipe is not missing or damaged.  
**[Basis: SMAQMD Rule 448]**
10. Maintenance inspections, except as provided in Condition No. 11, shall be conducted for each day the Phase II vapor recovery system is operated to ensure that vapor recovery system components that are verifiable through direct measurement or observation are in proper working order. Any equipment with a major defect listed in the VRED list (California Code of Regulations, Title 17, Part III, Chapter 1, Subchapter 8, Section 94006), shall be removed from service and tagged to ensure that it is not used until it is repaired and brought into compliance before being returned to service.  
**[Basis: SMAQMD Rule 449]**
11. The maintenance inspection requirements in Condition No. 10 shall not be required on Saturdays, Sundays and holidays for gasoline dispensing facilities with a six month average monthly gasoline throughput of less than 100,000 gallons.  
**[Basis: SMAQMD Rule 449]**
12. The owner or operator of a vapor recovery system shall ensure that the removal from service of one component of a vapor recovery system with multiple components will not result in gasoline liquid or vapors entering the atmosphere.  
**[Basis: SMAQMD Rule 448 and Rule 449]**

## **V.E. EQUIPMENT SPECIFIC REQUIREMENTS - GASOLINE DISPENSING FACILITY**

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13. Defects discovered during the maintenance inspection and repaired in accordance with Title 17, Division 3, Subchapter 7.5, Chapter 1, Section 93101 of the California Code of Regulations such that after repair gasoline liquid or vapors do not enter the atmosphere shall not constitute a violation of SMAQMD Rule 449.

**[Basis: SMAQMD Rule 448 and Rule 449]**

14. Gasoline shall not be handled in a manner that would result in vapor release to the atmosphere for an extended period of time. Measures to be taken include, but are not limited to the following:

- A. Minimize gasoline spills.
- B. Clean up spills as expeditiously as practicable.
- C. Cover all open gasoline containers and all gasoline storage tank fill-pipes with a gasketed seal when not in use.
- D. Minimize gasoline sent to open waste collection systems that collect and transport gasoline to reclamation and recycling devices, such as oil/water separators.

**[Basis: 40 CFR 63.11116]**

## **NOTIFICATION AND REPORTING REQUIREMENTS**

15. A. At least 7 days prior to the performance of reverification testing, the owner or operator shall notify the SMAQMD Air Pollution Control Officer of the exact date and time of the applicable test.
- B. If the vapor recovery system fails any of the applicable tests and the necessary repairs are performed that same day, the owner or operator may retest the vapor recovery system on the same day without re-notification, provided that the reasons for the test failure and any repairs performed are properly documented in the test reports and repair records.

**[Basis: SMAQMD Rule 202]**

16. Results of the reverification tests shall be delivered to the SMAQMD Air Pollution Control Officer within thirty days of completion of the test. The test results shall contain the following information:

- A. Name, location, address and telephone number of the facility tested and SMAQMD permit number.
- B. Name, address and phone number of the person or company performing the test.
- C. Date of the test.

## **V.E. EQUIPMENT SPECIFIC REQUIREMENTS - GASOLINE DISPENSING FACILITY**

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D. Test data.

E. Number of nozzles tested.

F. Number of tanks tested.

G. Statement of Pass or fail.

**[Basis: SMAQMD Rule 202]**

### **RECORDKEEPING REQUIREMENTS**

17. The following record shall be continuously maintained onsite for the most recent five year period and shall be made available to the SMAQMD Air Pollution Control Officer upon request. Monthly and quarterly records shall be made available for inspection within 30 days of the end of the previous month or quarter, respectively.

**[Basis: SMAQMD Rule 202]**

Frequency	Information to be recorded
At all times	<p>A. Maintenance records for the vapor recovery system.</p> <p>B. Repair records for the vapor recovery system.</p> <p>C. Maintenance inspection reports.</p> <p>D. Records of repairs performed as a result of defects discovered during daily maintenance inspections.</p> <p>E. Performance test results.</p> <p>F. Reverification of performance test results.</p>
Daily	<p>G. Daily maintenance inspection reports including at least the following:</p> <p>i. Date and time of inspection.</p> <p>ii. List of defects from the California Code of Regulations, Title 17, Part III, Chapter 1, Subchapter 8, Section 94006 that are applicable to the vapor recovery equipment and have a verification procedure of "direct observation" or "direct measurement".</p> <p>iii. Notation by person performing inspection whether each defect is present.</p> <p>iv. Description of any defects discovered.</p>

## **V.E. EQUIPMENT SPECIFIC REQUIREMENTS - GASOLINE DISPENSING FACILITY**

Frequency	Information to be recorded
	v. Action taken upon discovery of a defect. vi. Name and signature of person performing inspection.
Monthly	H. Total gasoline throughput. (gallons/month)
Quarterly	I. Total gasoline throughput (gallons/quarter)

### **EMISSION TESTING REQUIREMENTS**

18. The following performance and reverification tests shall be conducted and passed once every 12 months.

A. Static pressure (leak decay) test according to the CARB Test Procedure TP-201.3B.

B. Any other tests required by an applicable CARB Executive Order.

**[Basis: SMAQMD Rule 448]**

19. Any person who conducts performance and reverification tests shall meet all of the following:

A. Be certified by the International Code Council (ICC) for vapor recovery system testing and repair.

B. If required by the CARB Executive Order, be certified by the system manufacturer.

C. Maintain and make available any and all certifications as required in Condition No. 21.A and B.

**[Basis: SMAQMD Rule 448]**

### **EMISSION REDUCTION CREDIT (ERC) REQUIREMENTS**

20. ROC ERCs shall be surrendered (and have been surrendered - see Condition No. 21) to the SMAQMD Air Pollution Control Officer to offset the following amount of project ROC emissions for SMAQMD Rule 202 New Source Review purposes:

**[Basis: SMAQMD Rule 202]**

Equipment	Amount of Project ROC Emissions For Which ERCs Are to be Provided lb/quarter			
	Quarter 1	Quarter 2	Quarter 3	Quarter 4
Gasoline Dispensing	45	46	46	46

## V.E. EQUIPMENT SPECIFIC REQUIREMENTS - GASOLINE DISPENSING FACILITY

21. The following ROC ERCs have been surrendered to the SMAQMD Air Pollution Control Officer to comply with the SMAQMD Rule 202 New Source Review requirement as stated in Condition No. 20:

**[Basis: SMAQMD Rule 202]**

Emission Reduction Credit Certificate No.	Face Value of ROC ERC Certificates Surrendered lb/quarter				Inter-Pollutant Trading Ratio	Offset Ratio	Value Applied to the Project ROC Emission Liability lb/quarter			
	Qtr 1	Qtr 2	Qtr 3	Qtr 4			Qtr 1	Qtr 2	Qtr 3	Qtr 4
C07-1010 SMAQMD Community Bank Lease <b>Lease expires on: 07-01-2012</b>	46	46	46	46	N/A	1.0:1	46	46	46	46

- (A) Emission Reduction Credits in the amount specified shall be provided at all times that the permitted equipment is allowed to operate:
- The permit shall expire on the date that the ERCs expire unless replacement ERCs have been provided as specified in (ii) below.
  - When ERCs are provided that have an expiration date, **and prior to their expiration only**, the permittee can provide replacement ERCs. The permittee shall submit a valid permit application to modify the current SMAQMD Permit to Operate and shall pay the required permit fees. The application shall be filed prior to the ERC expiration date such that sufficient time is available to SMAQMD staff to process the application.
    - The application shall be evaluated in accordance with the requirements of the current SMAQMD Rule 202 - New Source Review and Rule 204 - Emission Reduction Credits.
    - ERCs shall be required in an amount which is the larger of:
      - The originally specified amount, or
      - The amount specified by the current SMAQMD Rule 202 - New Source Review at the time of replacement.
  - Failure to provide replacement ERCs prior to the expiration date of the current ERCs associated with the SMAQMD Permit to Operate shall require that the permittee reapply for an Authority to Construct and Permit to Operate for the subject equipment if continued operation of the equipment is desired. The equipment will be subject to Best Available Control Technology requirements and offsetting requirements of SMAQMD Rule 202 - New Source Review at the time of repermitting.

## V.F. EQUIPMENT SPECIFIC REQUIREMENTS - TROMMEL SCREEN AND IC ENGINE (TSA)

- A. EQUIPMENT DESCRIPTION:** The information specified under this section is enforceable by the SMAQMD, U.S. EPA and the public.

The requirements specified under the following sections apply to the following equipment:

### Trommel Screen

P/O No. 19188

Manufacturer: Powerscreen

Model: 830

### IC Engine (TSA) (driving Trommel Screen)

P/O No. 21262

Make: Deutz

Model: BF6L914C

Serial No.: 8738125

Engine BHP: 158 HP at 2150 rpm

Model Year: 2005

EPA Family No.: 5DZXL06.5037

Emissions Certification: Tier 2

Engine Type: 4-cycle, turbocharged

Fuel: CARB diesel

Equipment Driven: Trommel screen

- B. EQUIPMENT SPECIFIC FEDERALLY ENFORCEABLE REQUIREMENTS:** The requirements specified under this section are enforceable by the SMAQMD, U.S. EPA and the public.

### EMISSION LIMIT REQUIREMENTS

1. Emissions from the Trommel Screen shall not exceed the following limits:

**[Basis: SMAQMD Rule 202]**

P/O 19188 Trommel Screen

Pollutant	Emission Factor (A) lb/ton	Maximum Allowable Emissions (B)				
		Daily lb/day	Quarter 1 lb/quarter	Quarter 2 lb/quarter	Quarter 3 lb/quarter	Quarter 4 lb/quarter
ROC	NA	NA	NA	NA	NA	NA
NOx	NA	NA	NA	NA	NA	NA
SO2	NA	NA	NA	NA	NA	NA
PM10	0.01	4.5	334	334	334	334

## V.F. EQUIPMENT SPECIFIC REQUIREMENTS - TROMMEL SCREEN AND IC ENGINE (TSA)

Pollutant	Emission Factor (A) lb/ton	Maximum Allowable Emissions (B)				
CO	NA	NA	NA	NA	NA	NA

(A) Emission factor for PM10 is from the Title V permit evaluation conducted by the BAAQMD for a similar trommel screen process at a composting facility.

(B) Maximum Allowable Emissions are based on 450 tons/day and 33,436 tons/quarter.

2. Emissions from the IC Engine (TSA) shall not exceed the following limits:

**[Basis: SMAQMD Rule 202]**

P/O 21262 IC Engine (TSA)

Pollutant	Emission Factor (A) grams/hp-hr	Maximum Allowable Emissions (B)			
		Quarter 1 lb/quarter	Quarter 2 lb/quarter	Quarter 3 lb/quarter	Quarter 4 lb/quarter
ROC	0.27	41	41	41	41
NOx	4.33	661	661	661	661
SO2	0.05	8	8	8	8
PM10	0.16	24	24	24	24
CO	0.89	137	137	137	137

(A) The emission factor for ROC was supplied by Duetz USA because the CARB Off Road Engine Certification only lists the emission factor for the combined NMHC+NOx.

(B) The emission factor for NOx was supplied by Duetz USA because the CARB Off Road Engine Certification only lists the emission factor for the combined NMHC+NOx.

(C) The emission factor for SO2 is based on 0.015% sulfur by weight in the diesel fuel.

(D) The emission factor for PM10 is from the CARB Off Road Engine Certification for this engine model and family U-R-013-0155, dated 09-20-2004.

(E) The emission factor for CO is from the CARB Off Road Engine Certification for this engine model and family U-R-013-0155, dated 09-20-2004.

(F) Maximum Allowable Emissions are based on 158 hp, 24 hours/day and 439 hours/calendar quarter.

## EQUIPMENT OPERATION REQUIREMENTS

3. The IC Engine (TSA) shall not remain at the same location for more than 12 consecutive months.

**[Basis: SMAQMD Rule 202]**

#### **V.F. EQUIPMENT SPECIFIC REQUIREMENTS - TROMMEL SCREEN AND IC ENGINE (TSA)**

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4. The maximum amount of material processed in the Trommel Screen shall not exceed:  
**[Basis: SMAQMD Rule 202]**

Equipment	Maximum Allowable Material Processed	
	tons/day	tons/quarter
Trommel Screen	450	33,436

5. The IC Engine (TSA) shall not operate more than the following hours:  
**[Basis: SMAQMD Rule 202]**

Equipment	Maximum Allowable Operating Hours hours/quarter
IC Engine (TSA)	439.0

6. Material processed by the Trommel Screen shall have sufficient moisture to comply with SMAQMD Rule 401 for visible emissions limits.  
**[Basis: SMAQMD Rule 202]**

7. The IC Engine (TSA) shall be equipped with a non-resetting totalizing hour meter.  
**[Basis: SMAQMD Rule 202]**

8. The IC Engine (TSA) shall be fueled with:

- A. CARB diesel fuel, or
  - B. Alternative diesel fuel that has been verified through the CARB Verification Procedure for In-Use Strategies to Control Emissions from Diesel Engines, or
  - C. CARB diesel fuel utilizing fuel additives that have been verified through the CARB Verification Procedure for In-Use Strategies to Control Emissions from Diesel Engines.
- [Basis: SMAQMD Rule 202]**

## V.F. EQUIPMENT SPECIFIC REQUIREMENTS - TROMMEL SCREEN AND IC ENGINE (TSA)

### RECORDKEEPING AND REPORTING REQUIREMENTS

9. The following records shall be continuously maintained onsite for the most recent five year period and shall be made available to the SMAQMD Air Pollution Control Officer upon request. Quarterly records shall be made available for inspection within 30 days of the end of the previous quarter.

**[Basis: SMAQMD Rule 202]**

Frequency	Information to be recorded
When IC Engine (TSA) is moved	A. The location that the IC Engine (TSA) is moved from. B. The location that the IC Engine (TSA) is moved to. C. The length of time the IC Engine (TSA) operated at the prior location.
Daily	D. The amount of material processed by the trommel screen. (tons/day)
Quarterly	E. The amount of material processed by the trommel screen. (tons/quarter) F. The number of hours that the IC Engine (TSA) operated. (hours/quarter)

### EMISSION REDUCTION CREDIT (ERC) REQUIREMENTS

10. ERCs shall be surrendered (and have been surrendered – see Condition No. 11) to the SMAQMD Air Pollution Control Officer to offset the following amount of project emissions for SMAQMD Rule 202 New Source Review purposes :

**[Basis: SMAQMD Rule 202]**

Equipment	Amount of Project Emissions for Which ERCs are to be Provided lb/quarter			
	Quarter 1	Quarter 2	Quarter 3	Quarter 4
Trommel Screen				
PM10	334	334	334	334
IC Engine (TSA)				
ROC	41	41	41	41

## V.F. EQUIPMENT SPECIFIC REQUIREMENTS - TROMMEL SCREEN AND IC ENGINE (TSA)

Equipment	Amount of Project Emissions for Which ERCs are to be Provided lb/quarter			
	Quarter 1	Quarter 2	Quarter 3	Quarter 4
NOx	661	661	661	661
SO2	24	24	24	24
PM10	24	24	24	24

11. The following ERCs have been surrendered to the SMAQMD Air Pollution Control Officer to comply with the SMAQMD Rule 202 New Source Review requirement as stated in Condition No. 10:

### [SMAQMD Permit to Operate Nos. 19188, 21262]

Emission Reduction Credit Certificate No.	Face Value of ERC Certificates Surrendered lb/quarter				Offset Ratio	Value Applied to the Project Emission Liability lb/quarter			
	Qtr 1	Qtr 2	Qtr 3	Qtr 4		Qtr 1	Qtr 2	Qtr 3	Qtr 4
Trommel Screen									
2005-04 (A) Placer APCD Lincoln Brand Feeds									
PM10	501	501	501	501	1.5:1	334	334	334	334
IC Engine (TS)									
No. P081005 (B) Essential Public Services Account Lease SMAQMD Priority Reserve Bank Lease Expires on: 10-01-2012									
ROC	50	50	50	50	1.0:1	50	50	50	50
NOx	861	861	861	861	1.3:1	662	662	662	662
SO2	24	24	24	24	1.0:1	24	24	24	24

## V.F. EQUIPMENT SPECIFIC REQUIREMENTS - TROMMEL SCREEN AND IC ENGINE (TSA)

Emission Reduction Credit Certificate No.	Face Value of ERC Certificates Surrendered lb/quarter				Offset Ratio	Value Applied to the Project Emission Liability lb/quarter			
	Qtr 1	Qtr 2	Qtr 3	Qtr 4		Qtr 1	Qtr 2	Qtr 3	Qtr 4
2005-04 (A) Placer APCD Lincoln Brand Feeds									
PM10	42	42	42	42	1.5:1	28	28	28	28

(A) The single PCAPCD ERC certificate No. 2005-04 is shown here split into two certificates for comparison with the ERC requirements of Condition No. 10 for the Trommel Screen and IC Engine.

NOTE: The amount of permanent PM10 ERCs provided for the IC engine is enough to offset 28 lb PM10/quarter. This is more than the 24 lb PM10/quarter maximum allowable emissions of the IC engine. This difference resulted from the permittee replacing the original IC engine (P/O 17921) in 2006 with the current IC engine (P/O 21262) but requesting in the 2006 permit action that the ERCs be transferred with no change to their value.

(B) ERCs in the amount specified shall be provided at all times that the permitted equipment is allowed to operate:

- The Permit to Operate, after issuance, shall expire on the date the ERCs expire unless replacement ERCs have been provided as specified in (2) below.
- When ERCs are provided that have an expiration date, **and prior to their expiration only**, the permittee can provide replacement ERCs. The permittee shall submit a valid permit application to modify the current Permit to Operate and shall pay the required permit fees. The application shall be filed prior to the ERC expiration date such that sufficient time is available to SMAQMD staff to process the application.
  - The application shall be evaluated in accordance with the requirements of the current SMAQMD Rule 202 - New Source Review and SMAQMD Rule 204 - Emission Reduction Credits.
  - ERCs shall be required in an amount which is the larger of:
    - The originally specified amount, or
    - The amount specified by the current SMAQMD Rule 202 - New Source Review at the time of replacement.
- Failure to provide replacement ERCs prior to the expiration date of the current ERCs associated with the Permit to Operate shall require that the permittee reapply for an Authority to Construct and Permit to Operate for the subject equipment if continued operation of the equipment is desired. The equipment will be subject to Best Available Control Technology requirements and offsetting requirements of SMAQMD Rule 202 - New Source Review at the time of repermitting.

**V.F. EQUIPMENT SPECIFIC REQUIREMENTS - TROMMEL SCREEN AND IC  
ENGINE (TSA)**

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**EMISSION TESTING REQUIREMENTS**

There are no periodic emission testing requirements.

## **V.G. EQUIPMENT SPECIFIC REQUIREMENTS - TROMMEL SCREEN AND IC ENGINE (TSB)**

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- A. EQUIPMENT DESCRIPTION:** The information specified under this section is enforceable by the SMAQMD, U.S. EPA and the public.

The requirements specified under the following sections apply to the following equipment:

### **Trommel Screen**

P/O No. 22922  
Manufacturer: McCloskey  
Model: 733 RE  
Serial No.: 80169

### **IC Engine (TSB) (driving Trommel Screen)**

P/O No. 22923  
Make: Caterpillar/Perkins  
Model: 2478  
ID No: 66614944  
EPA Family No.: APKXL06.6PJ1  
Manufactured: 5/6/10  
Engine Type: 4-cycle  
Aspiration: Turbocharged  
Engine BHP: 225 at 2200 RPM  
Displacement: 6.6 liter (402.8 Cubic inch)  
Fuel: Diesel  
Equipment Driven: Trommel screen

- B. EQUIPMENT SPECIFIC FEDERALLY ENFORCEABLE REQUIREMENTS:** The requirements specified under this section are enforceable by the SMAQMD, U.S. EPA and the public.

### **EMISSION LIMIT REQUIREMENTS**

1. Emissions from the Trommel Screen shall not exceed the following limits:  
**[Basis: SMAQMD Rule 202]**

P/O 22922 Trommel Screen

Pollutant	Emission Factor (A) lb/ton	Maximum Allowable Emissions (B)				
		Daily lb/day	Quarter 1 lb/quarter	Quarter 2 lb/quarter	Quarter 3 lb/quarter	Quarter 4 lb/quarter
ROC	NA	NA	NA	NA	NA	NA
NOx	NA	NA	NA	NA	NA	NA
SO2	NA	NA	NA	NA	NA	NA

## V.G. EQUIPMENT SPECIFIC REQUIREMENTS - TROMMEL SCREEN AND IC ENGINE (TSB)

Pollutant	Emission Factor (A) lb/ton	Maximum Allowable Emissions (B)				
PM10	0.01	9.9	293	293	293	293
CO	NA	NA	NA	NA	NA	NA

(A) Emission factor for PM10 is from the Title V permit evaluation conducted by the BAAQMD for a similar trommel screen process at a composting facility.

(B) Maximum Allowable Emissions are based on 990 tons/day and 29,250 tons/quarter.

2. Emissions from the IC Engine (TSB) shall not exceed the following limits:

**[Basis: SMAQMD Rule 202]**

P/O 22923 IC Engine (TSB)

Pollutant	Emission Factor (A) grams/hp-hr	Maximum Allowable Emissions (B)				
		Daily lb/day	Quarter 2 lb/quarter	Quarter 3 lb/quarter	Quarter 3 lb/quarter	Quarter 4 lb/quarter
ROC	1.14	13.6	294	294	294	294
NOx	2.76	32.9	712	712	712	712
ROC+NOx	2.76	32.9	712	712	712	712
SO2	0.005	0.1	1	1	1	1
PM10	0.13	1.5	34	34	34	34
PM2.5	0.13	1.5	34	34	34	34
CO	1.12	13.3	289	289	289	289
GHG	1.13 lb CO2e /hp-hr	3.1 ton/day	66 ton/qtr	66 ton/qtr	66 ton/qtr	66 ton/qtr

(A) The emission factor for ROC and NOx combined is 2.76 g/hp-hr from the CARB Off Road Engine Certification (CARB Executive Order U-R-022-015), dated January 16, 2009.

The emission factor used for NOx is 2.76 g/hp-hr because it is the worst case emission factor.

The emission factor used for ROC is from AP-42 Table 3.3-1 (10/96).

The emission factors for PM10 and CO are from the CARB Off Road Engine Certification, dated January 16, 2009. PM2.5 is assumed to be equal to PM10.

The emission factor for SO2 is based on 0.0015% sulfur by weight in the diesel fuel.

The emission factor for GHG is the CO<sub>2</sub>e emission factor as per Appendix A of CARB's Regulation for the Mandatory Reporting of Greenhouse Gas Emissions (CCR, Title 17, Subchapter 10, Article 2, sections 95100 to 95133).

## **V.G. EQUIPMENT SPECIFIC REQUIREMENTS - TROMMEL SCREEN AND IC ENGINE (TSB)**

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(B)Maximum Allowable Emissions are based on 225 hp, 24 hours/day and 520 hours/calendar quarter.

### **EQUIPMENT OPERATION REQUIREMENTS**

3. The IC Engine (TSB) shall not remain at the same location for more than 12 consecutive months.

**[Basis: SMAQMD Rule 202]**

4. The maximum amount of material processed in the Trommel Screen shall not exceed:

**[Basis: SMAQMD Rule 202]**

Equipment	Maximum Allowable Material Processed	
	tons/day	tons/quarter
Trommel Screen	990	29,250

5. The IC Engine (TSB) shall not operate more than the following hours:

**[Basis: SMAQMD Rule 202]**

Equipment	Maximum Allowable Operating Hours hours/quarter
IC Engine (TSB)	520

6. Material processed by the Trommel Screen shall have sufficient moisture to comply with SMAQMD Rule 401 for visible emissions limits.

**[Basis: SMAQMD Rule 202]**

7. The IC Engine (TSB) shall be equipped with a non-resetting totalizing hour meter.

**[Basis: SMAQMD Rule 202]**

8. The IC engine (SS1) shall be fueled with:

A. CARB diesel fuel, or

B. Alternative diesel fuel that has been verified through the CARB Verification Procedure for In-Use Strategies to Control Emissions from Diesel Engines, or

C. CARB diesel fuel utilizing fuel additives that have been verified through the CARB Verification Procedure for In-Use Strategies to Control Emissions from Diesel Engines.

**[Basis: SMAQMD Rule 202]**

## V.G. EQUIPMENT SPECIFIC REQUIREMENTS - TROMMEL SCREEN AND IC ENGINE (TSB)

### RECORDKEEPING AND REPORTING REQUIREMENTS:

9. The following records shall be continuously maintained onsite for the most recent five year period and shall be made available to the SMAQMD Air Pollution Control Officer upon request. Quarterly records shall be made available for inspection within 30 days of the end of the previous quarter.

**[Basis: SMAQMD Rule 202]**

Frequency	Information to be recorded
When equipment is moved	A. The location that the equipment is moved from. B. The location that the equipment is moved to. C. The length of time the equipment operated at the prior location.
Daily	D. The amount of material processed by the trommel screen. (tons/day)
Quarterly	E. The amount of material processed by the trommel screen. (tons/quarter)

### EMISSION REDUCTION CREDIT (ERC) REQUIREMENTS

10. ERCs shall be surrendered (and have been surrendered – see Condition No. 11) to the SMAQMD Air Pollution Control Officer to offset the following amount of project emissions for SMAQMD Rule 202 New Source Review purposes :

**[Basis: SMAQMD Rule 202]**

Equipment	Amount of Project Emissions for Which ERCs are to be Provided lb/quarter			
	Quarter 1	Quarter 2	Quarter 3	Quarter 4
Trommel Screen				
PM10	293	293	293	293
IC Engine (TSB)				
NOx	712	712	712	712
ROC	294	294	294	294
PM10	34	34	34	34
SO2	1	1	1	1

## V.G. EQUIPMENT SPECIFIC REQUIREMENTS - TROMMEL SCREEN AND IC ENGINE (TSB)

11. The following ERCs have been surrendered to the SMAQMD Air Pollution Control Officer to comply with the SMAQMD Rule 202 New Source Review requirement as stated in Condition No. 10:

**[Basis: SMAQMD Rule 202]**

Emission Reduction Credit Certificate No.	Face Value of ERC Certificates Surrendered lb/quarter				Offset Ratio	Value Applied to the Project Emission Liability lb/quarter			
	Qtr 1	Qtr 2	Qtr 3	Qtr 4		Qtr 1	Qtr 2	Qtr 3	Qtr 4
Trommel Screen									
Essential Public Services Account SMAQMD Priority Reserve Bank P11-1004 5 year Lease Expires on: 04-01-2016									
PM10	293	293	293	293	1:1	293	293	293	293
IC Engine (TSB)									
Essential Public Services Account SMAQMD Priority Reserve Bank P11-1004 5 year Lease Expires on: 04-01-2016									
NOx	712	712	712	712	1:1	712	712	712	712
ROC	294	294	294	294		294	294	294	294
PM10	31	31	31	31	1:1	31	31	31	31
SO2	1	1	1	1	1:1	1	1	1	1

(A) ERCs in the amount specified shall be provided at all times that the permitted equipment is allowed to operate:

1. The Permit to Operate, after issuance, shall expire on the date the ERCs expire unless replacement ERCs have been provided as specified in (2) below.

## **V.G. EQUIPMENT SPECIFIC REQUIREMENTS - TROMMEL SCREEN AND IC ENGINE (TSB)**

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2. When ERCs are provided that have an expiration date, **and prior to their expiration only**, the permittee can provide replacement ERCs. The permittee shall submit a valid permit application to modify the current Permit to Operate and shall pay the required permit fees. The application shall be filed prior to the ERC expiration date such that sufficient time is available to SMAQMD staff to process the application.
  - (a) The application shall be evaluated in accordance with the requirements of the current SMAQMD Rule 202 - New Source Review and SMAQMD Rule 204 - Emission Reduction Credits.
  - (b) ERCs shall be required in an amount which is the larger of:
    - (1) The originally specified amount, or
    - (2) The amount specified by the current SMAQMD Rule 202 - New Source Review at the time of replacement.
3. Failure to provide replacement ERCs prior to the expiration date of the current ERCs associated with the Permit to Operate shall require that the permittee reapply for an Authority to Construct and Permit to Operate for the subject equipment if continued operation of the equipment is desired. The equipment will be subject to Best Available Control Technology requirements and offsetting requirements of SMAQMD Rule 202 - New Source Review at the time of repermitting.

### **EMISSION TESTING REQUIREMENTS**

There are no periodic emission testing requirements.

## V.H. EQUIPMENT SPECIFIC REQUIREMENTS - IC ENGINE (SS1), AUXILIARY ON STREET SWEEPER

- A. EQUIPMENT DESCRIPTION:** The information specified under this section is enforceable by the SMAQMD, U.S. EPA and the public.

The requirements specified under the following sections apply to the following equipment:

### IC Engine, Auxiliary on Street Sweeper (SS1), non-road, portable, prime power use

P/O No. 23105

Manufacturer: John Deere

Model: 4045TF270

Serial No.: PE4045T533975

Type: 4 cycle, turbocharged

Displacement: 4.5 liters

Horsepower: 99 hp at 2500 rpm

Fuel: Diesel

EPA Family No.: 5JDXL04.5083

Use: Auxiliary on street sweeper powering vacuum system and brushes

- B. EQUIPMENT SPECIFIC FEDERALLY ENFORCEABLE REQUIREMENTS:** The requirements specified under this section are enforceable by the SMAQMD, U.S. EPA and the public.

### EMISSION LIMIT REQUIREMENTS

1. Emissions from the IC Engine (SS1) shall not exceed the following limits:  
**[Basis: SMAQMD Rule 202]**

P/O 23105 IC Engine (SS1)

Pollutant	Emission Factor (A) grams/hp-hr	Maximum Allowable Emissions (B) lb/quarter		
		Daily lb/day	Quarterly lb/quarter	Yearly lb/year
ROC	0.34	1.8	39	156
NOx	3.98	20.9	452	1,808
SO2	0.005	0.0	19	4
PM10	0.18	0.9	20	80
PM2.5	0.18	0.9	20	80
CO	1.04	5.5	118	472
GHG	511.75	1.3 ton/day	29 ton/quarter	116 ton/year

(A) Emission factors for ROC and NOx were supplied by John Deere because the CARB Off Road Engine Certification only lists the emission factor for the combined NMHC+NOx. The emission factors for PM10 and CO are from the CARB Off Road Engine Certification for this engine model and family dated 10-04-2004. PM2.5 is assumed to be equal to

## **V.H. EQUIPMENT SPECIFIC REQUIREMENTS - IC ENGINE (SS1), AUXILIARY ON STREET SWEEPER**

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PM10. The emission factor for SO<sub>2</sub> is based on 0.0015% sulfur by weight in the diesel fuel. The emission factor for GHG is the CO<sub>2</sub>e emission factor as per Appendix A of CARB's Regulation for the Mandatory Reporting of Greenhouse Gas Emissions (CCR, Title 17, Subchapter 10, Article 2, sections 95100 to 95133). All emission limits are in English units.

- (B) Maximum Allowable Emissions are based on 99 hp and 520 hours/calendar quarter. The yearly emissions are based on the cumulative quarterly emissions.

### **EQUIPMENT OPERATION REQUIREMENTS**

2. The IC Engine (SS1) shall not remain at the same location for more than 12 consecutive months.

**[Basis: SMAQMD Rule 202]**

3. The IC engine (SS1) shall not operate more than the following hours:

**[Basis: SMAQMD Rule 202]**

Equipment	Maximum Allowable Operating Hours hours/quarter
IC engine (SS1)	520

4. The IC engine (SS1) shall be equipped with a non-resetting totalizing hour meter.

**[Basis: SMAQMD Rule 202]**

5. The IC engine (SS1) shall be fueled with:

A. CARB diesel fuel, or

B. Alternative diesel fuel that has been verified through the CARB Verification Procedure for In-Use Strategies to Control Emissions from Diesel Engines, or

C. CARB diesel fuel utilizing fuel additives that have been verified through the CARB Verification Procedure for In-Use Strategies to Control Emissions from Diesel Engines.

**[Basis: SMAQMD Rule 202]**

### **RECORDKEEPING AND REPORTING REQUIREMENTS:**

6. The following records shall be continuously maintained onsite for the most recent five year period and shall be made available to the SMAQMD Air Pollution Control Officer upon request. Quarterly records shall be made available for inspection within 30 days of the end of the previous quarter.

**[Basis: SMAQMD Rule 202]**

## V.H. EQUIPMENT SPECIFIC REQUIREMENTS - IC ENGINE (SS1), AUXILIARY ON STREET SWEEPER

Frequency	Information to be recorded
Quarterly	A. The number of hours that the IC Engine (SS) operated. (hours/quarter)

### EMISSION REDUCTION CREDIT (ERC) REQUIREMENTS

7. ERCs shall be surrendered (and have been surrendered - see Condition No. 8) to the SMAQMD Air Pollution Control Officer to offset the following amount of project emissions for SMAQMD Rule 202 New Source Review purposes :

**[Basis: SMAQMD Rule 202]**

Pollutant	Amount of Project Emissions for which ERCs are to be Provided lb/quarter			
	Quarter 1	Quarter 2	Quarter 3	Quarter 4
ROC	39	39	39	39
NOx	452	452	452	452
SO2	19	19	19	19
PM10	20	20	20	20

8. The following ERCs have been surrendered to the SMAQMD Air Pollution Control Officer as required in Condition No. 7:

**[Basis: SMAQMD Rule 202]**

Emission Reduction Credit Certificate No.	Face Value of ERC Certificates Surrendered lb/quarter				Offset Ratio	Value Applied to the Project Emission Liability lb/quarter			
	Qtr 1	Qtr 2	Qtr 3	Qtr 4		Qtr 1	Qtr 2	Qtr 3	Qtr 4
Essential Public Services Account SMAQMD Priority Reserve Bank P11-1009 (A) <b>Lease Expires on: 10-01-2014</b>									
ROC	39	39	39	39	1.0:1	39	39	39	39

## V.H. EQUIPMENT SPECIFIC REQUIREMENTS - IC ENGINE (SS1), AUXILIARY ON STREET SWEEPER

Emission Reduction Credit Certificate No.	Face Value of ERC Certificates Surrendered lb/quarter				Offset Ratio	Value Applied to the Project Emission Liability lb/quarter			
	Qtr 1	Qtr 2	Qtr 3	Qtr 4		Qtr 1	Qtr 2	Qtr 3	Qtr 4
NOx	452	452	452	452	1.0:1	452	452	452	452
SO2	19	19	19	19	1.0:1	19	19	19	19
PM10	20	20	20	20	1.0:1	20	20	20	20

- (A) Emission Reduction Credits in the amount specified shall be provided at all times that the permitted equipment is allowed to operate:
- The permit shall expire on the date that the ERCs expire unless replacement ERCs have been provided as specified in (ii) below.
  - When ERCs are provided that have an expiration date, **and prior to their expiration only**, the permittee can provide replacement ERCs. The permittee shall submit a valid permit application to modify the current Permit to Operate and shall pay the required permit fees. The application shall be filed prior to the ERC expiration date such that sufficient time is available to SMAQMD staff to process the application.
    - The application shall be evaluated in accordance with the requirements of the current SMAQMD Rule 202 - New Source Review and SMAQMD Rule 204 - Emission Reduction Credits.
    - ERCs shall be required in an amount which is the larger of:
      - The originally specified amount, or
      - The amount specified by the current SMAQMD Rule 202 - New Source Review at the time of replacement.
  - Failure to provide replacement ERCs prior to the expiration date of the current ERCs associated with the Permit to Operate shall require that the permittee reapply for an Authority to Construct and Permit to Operate for the subject equipment if continued operation of the equipment is desired. The equipment shall be subject to Best Available Control Technology requirements and offsetting requirements of SMAQMD Rule 202 - New Source Review at the time of repermitting.

### EMISSION TESTING REQUIREMENTS

There are no periodic emission testing requirements.

## **V.I. EQUIPMENT SPECIFIC REQUIREMENTS - IC ENGINE (SS2), AUXILIARY ON STREET SWEEPER**

- A. EQUIPMENT DESCRIPTION:** The information specified under this section is enforceable by the SMAQMD, U.S. EPA and the public.

The requirements specified under the following sections apply to the following equipment:

**IC Engine (SS2), Auxiliary on Street Sweeper No. 2, non-road, portable, prime power use**

P/O No. 21893

Make: John Deere  
Model: Model 4045HF280B  
Serial No.: PE4045L074663  
Model Year: 2008  
EPA Family No.: 8JDXL04.5111  
Emissions Certification: Tier 3  
Engine Type: 4-cycle  
Aspiration: Turbocharged  
Engine BHP: 99 HP at 2400 RPM  
Displacement: 4.5 liter  
Fuel: CARB diesel  
Equipment Driven: Vacuum system and brushes on street sweeper

- B. EQUIPMENT SPECIFIC FEDERALLY ENFORCEABLE REQUIREMENTS:** The requirements specified under this section are enforceable by the SMAQMD, U.S. EPA and the public.

### **EMISSION LIMITS:**

1. Emissions from the IC Engine (SS2) shall not exceed the following limits:  
**[Basis: SMAQMD Rule 202]**

Pollutant	Emission Factor grams/hp -hr	Maximum Allowable Emissions (D) lb/quarter			
		Quarter 1	Quarter 2	Quarter 3	Quarter 4
ROC+NOx	3.0 (A)	NA	NA	NA	NA
ROC	1.0 (C)	113	113	113	113
NOx	3.0 (C)	339	339	339	339
SO2	0.05 (B)	6	6	6	6
PM10	0.22 (A)	25	25	25	25
CO	0.67 (A)	76	76	76	76

- (A) The emission factors for ROC+NOx, PM10 and CO are from the CARB Off Road Engine Certification for this engine model and family dated 12-14-2007.

## **V.I. EQUIPMENT SPECIFIC REQUIREMENTS - IC ENGINE (SS2), AUXILIARY ON STREET SWEEPER**

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- (B) The emission factor for SO<sub>2</sub> is based on 0.015% sulfur by weight in the diesel fuel.
- (C) For the purpose of calculating NO<sub>x</sub> and ROC individually, ROC emissions are assessed at the worse case scenario of the uncontrolled U.S. EPA AP-42 emission factor of 1.0 gram/hp-hr and NO<sub>x</sub> emissions are assessed at the worse case limit of 3.0 gram/hp-hr.
- (D) Maximum Allowable Emissions are based on 99 hp, 24 hours/day and 520 hours/calendar quarter.

### **EQUIPMENT OPERATION REQUIREMENTS:**

- 2. The IC Engine (SS2) shall not remain at the same location for more than 12 consecutive months.  
**[Basis: SMAQMD Rule 202]**
- 3. The IC engine (SS2) shall not operate more than the following hours:  
**[Basis: SMAQMD Rule 202]**

Equipment	Maximum Allowable Operating Hours hours/quarter
IC engine (SS2)	520

- 4. The IC engine (SS2) shall be equipped with a non-resetting totalizing hour meter.  
**[Basis: SMAQMD Rule 202]**
- 5. The IC engine (SS2) shall be fueled with:
  - A. CARB diesel fuel, or
  - B. Alternative diesel fuel that has been verified through the CARB Verification Procedure for In-Use Strategies to Control Emissions from Diesel Engines, or
  - C. CARB diesel fuel utilizing fuel additives that have been verified through the CARB Verification Procedure for In-Use Strategies to Control Emissions from Diesel Engines.**[Basis: SMAQMD Rule 202]**

### **RECORDKEEPING AND REPORTING REQUIREMENTS:**

- 6. The following records shall be continuously maintained onsite for the most recent five year period and shall be made available to the SMAQMD Air Pollution Control Officer upon request. Quarterly records shall be made available for inspection within 30 days of the end of the previous quarter.  
**[Basis: SMAQMD Rule 202]**

## V.I. EQUIPMENT SPECIFIC REQUIREMENTS - IC ENGINE (SS2), AUXILIARY ON STREET SWEEPER

Frequency	Information to be recorded
Quarterly	A. The number of hours that the IC Engine (SS2) operated. (hours/quarter)

### EMISSION REDUCTION CREDIT (ERC) REQUIREMENTS:

7. ERCs shall be surrendered (and have been surrendered - see Condition No. 8) to the SMAQMD Air Pollution Control Officer to offset the following amount of project emissions for SMAQMD Rule 202 New Source Review purposes :

**[Basis: SMAQMD Rule 202]**

Pollutant	Amount of Project Emissions for which ERCs are to be Provided lb/quarter			
	Quarter 1	Quarter 2	Quarter 3	Quarter 4
NOx	339	339	339	339
SO2	6	6	6	6
PM10	25	25	25	25

8. The following ERCs have been surrendered to the SMAQMD Air Pollution Control Officer as required in Condition No. 7:

**[Basis: SMAQMD Rule 202]**

Emission Reduction Credit Certificate No.	Face Value of ERC Certificates Surrendered lb/quarter				Offset Ratio	Value Applied to the Project Emission Liability lb/quarter			
	Qtr 1	Qtr 2	Qtr 3	Qtr 4		Qtr 1	Qtr 2	Qtr 3	Qtr 4
Essential Public Services Account SMAQMD Priority Reserve Bank P09-1013 (A) <b>4 Year Lease</b> <b>Expires on:</b> <b>04-01-2013</b>									
NOx	339	339	339	339	1.0:1	339	339	339	339
SO2	6	6	6	6	1.0:1	6	6	6	6

## V.I. EQUIPMENT SPECIFIC REQUIREMENTS - IC ENGINE (SS2), AUXILIARY ON STREET SWEEPER

Emission Reduction Credit Certificate No.	Face Value of ERC Certificates Surrendered lb/quarter				Offset Ratio	Value Applied to the Project Emission Liability lb/quarter			
	Qtr 1	Qtr 2	Qtr 3	Qtr 4		Qtr 1	Qtr 2	Qtr 3	Qtr 4
PM10	25	25	25	25	1.0:1	25	25	25	25

(A) Emission Reduction Credits in the amount specified shall be provided at all times that the permitted equipment is allowed to operate:

1. The permit shall expire on the date that the ERCs expire unless replacement ERCs have been provided as specified in (ii) below.
2. When ERCs are provided that have an expiration date, **and prior to their expiration only**, the permittee can provide replacement ERCs. The permittee shall submit a valid permit application to modify the current Permit to Operate and shall pay the required permit fees. The application shall be filed prior to the ERC expiration date such that sufficient time is available to SMAQMD staff to process the application.
  - a. The application shall be evaluated in accordance with the requirements of the current SMAQMD Rule 202 - New Source Review and SMAQMD Rule 204 - Emission Reduction Credits.
  - b. ERCs shall be required in an amount which is the larger of:
    - (1) The originally specified amount, or
    - (2) The amount specified by the current SMAQMD Rule 202 - New Source Review at the time of replacement.
3. Failure to provide replacement ERCs prior to the expiration date of the current ERCs associated with the Permit to Operate shall require that the permittee reapply for an Authority to Construct and Permit to Operate for the subject equipment if continued operation of the equipment is desired. The equipment shall be subject to Best Available Control Technology requirements and offsetting requirements of SMAQMD Rule 202 - New Source Review at the time of repermitting.

### EMISSION TESTING REQUIREMENTS

There are no periodic emission testing requirements.

## **V.J. EQUIPMENT SPECIFIC REQUIREMENTS - IC ENGINE, STANDBY, POWERING AN EMERGENCY ELECTRICAL GENERATOR**

- A. EQUIPMENT DESCRIPTION:** The information specified under this section is enforceable by the SMAQMD, U.S. EPA and the public.

The requirements specified under the following sections apply to the following equipment:

### **IC Engine, Standby, Powering an emergency electrical generator**

P/O No. 22419

Make: Detroit Diesel  
Model: 6063HV35  
Serial No.: 06R1044275  
Model Year: 2010  
EPA Family No.: ADDXL14.0VLD  
Emissions Certification: Tier 3  
Engine Type: 4-cycle  
Aspiration: Turbocharged and Aftercooled  
Engine BHP: 550 HP at 1800 RPM  
Displacement: 855 cu. in.  
Equipment Driven: emergency electrical generator

- B. EQUIPMENT SPECIFIC FEDERALLY ENFORCEABLE REQUIREMENTS:** The requirements specified under this section are enforceable by the SMAQMD, U.S. EPA and the public.

### **EMISSION LIMIT REQUIREMENTS**

1. The emissions from the IC engine shall not exceed the following limits:  
[Basis: **SMAQMD Rule 202**]

Pollutant	Emission Factor (A) g/hp-hr	Maximum Allowable Emissions (B)		
		lb/day	lb/quarter	lb/year
ROC	1.0	29.1	243	243
NO <sub>x</sub>	3.0	87.3	728	728
ROC + NO <sub>x</sub> (C)	3.0	87.3	728	728
SO <sub>x</sub>	0.005	0.1	1	1
PM <sub>10</sub>	0.149	4.3	36	36
CO	2.6	75.7	631	631
GHG	22.35 lb CO <sub>2</sub> e/gal	7 ton/day	60 ton/qtr	60 ton/yr

(A) Emission factors for ROC, NO<sub>x</sub>, ROC + NO<sub>x</sub>, and CO are based on the District's BACT standards (Tier 3 standard). PM emissions are based on T-BACT standards. SO<sub>x</sub> emissions are based on 0.0015% Sulfur by weight in the fuel. GHG emission factor is the CO<sub>2</sub>e emission factor as per Appendix A of CARB's Regulation for the Mandatory Reporting of Greenhouse Gas Emissions (CCR, Title 17, Subchapter 10, Article 2,

## **V.J. EQUIPMENT SPECIFIC REQUIREMENTS - IC ENGINE, STANDBY, POWERING AN EMERGENCY ELECTRICAL GENERATOR**

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sections 95100 to 95133).

- (B) Emissions based on 550 hp, 200 hours/quarter and 200 hours/year of operation.
- (C) The engine is required to comply with the combined NO<sub>x</sub> + ROC emission standard. For the purpose of calculating NO<sub>x</sub> and ROC individually, ROC emissions are assessed at the worse case scenario of the uncontrolled AP-42 emission factor of 1.0 g/bhp-hr and NO<sub>x</sub> emissions are assessed at the worse case limit of 3.0 g/bhp-hr. BACT is only triggered for individual pollutants.

### **EQUIPMENT OPERATION REQUIREMENTS**

- 2. The IC engine shall operate only for the following purposes and shall not operate more than the following hours:

**[Basis: SMAQMD Rule 202]**

Type of Operational Hours	Maximum Allowable Operation	
	hours/quarter	Hours/year
Maintenance Purposes (A)	50	50
All Operation – Maintenance and Emergency (B)	200	200

(A) Maintenance purposes is defined as: The operation of an IC engine in order to preserve the integrity of the IC engine and its associated generator, the facility's electrical distribution system or when required by the District to verify compliance with the applicable rules and regulations.

(B) Emergency is defined as: when electrical service from the serving utility is interrupted by an unforeseeable event.

- 3. The IC engine shall be equipped with a non-resetting hour meter, with a minimum display capability of 9,999 hours, to ensure compliance with condition numbers 1 and 2.

**[Basis: SMAQMD Rule 202]**

- 4. Upon request of the Air Pollution Control Officer or designee, once each year, during daylight hours, the IC engine shall be run at maximum anticipated load, from a cold start condition, for observation of compliance with opacity limitations.

**[Basis: SMAQMD Rule 202]**

## **V.J. EQUIPMENT SPECIFIC REQUIREMENTS - IC ENGINE, STANDBY, POWERING AN EMERGENCY ELECTRICAL GENERATOR**

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5. The IC engine shall be fueled with CARB diesel fuel, or an alternative diesel fuel that meets the requirements of the verification procedure (as codified in Title 13, CCR, sections 2700-2710), or an alternative fuel, or CARB diesel fuel used with fuel additives that meets the requirements of the verification procedure, or any combination of fuels listed in this condition.

**[Basis: SMAQMD Rule 202]**

### **RECORD KEEPING**

6. The following record shall be continuously maintained onsite for the most recent five year period and shall be made available to the Air Pollution Control Officer upon request. Quarterly and yearly records shall be made available within 30 days following the end of the quarter and year respectively.

**[Basis: SMAQMD Rule 202]**

Frequency	Information to be recorded
When Operated	A. Date. B. Purpose – either maintenance (M) or emergency (E). C. Number of hours of operation.
Monthly	D. Total number of hours of operation for each operating mode (hours/month).
Quarterly	E. Total number of hours of operation for each operating mode (hours/quarter).
Yearly	F. Total number of hours of operation for each operating mode (hours/year).
All Fuel Deliveries	G. Retain fuel purchase records that account for all fuel purchased for use in the engine: Fuel purchase records shall include: 1. Identification of type of fuel (i.e. CARB diesel, alternative diesel, etc.). 2. Quantity of fuel purchased. 3. Date of fuel purchase. 4. Signature of person receiving fuel. 5. Signature of fuel provider indicating that fuel was delivered.

### **EMISSION TESTING REQUIREMENTS**

There are no periodic emission testing requirements.

## VI. INSIGNIFICANT EMISSIONS UNITS

The following systems are considered insignificant emissions units and are not subject to equipment specific requirements. However, these units are required to comply with all applicable general requirements.

The permittee may supplement, modify or remove insignificant emissions units without requesting a Title V permit modification as long as the basis for the insignificant emissions unit designation remains valid. The list of insignificant emissions units shall be updated when a Title V permit modification occurs.

<b>Equipment Description</b>	<b>Basis for the Determination of Insignificant Emissions Unit is made based on SMAQMD "List and Criteria", Part B, Section 5 modified April 2001.</b>
Vehicles used to transport passengers or freight	I. General criteria for insignificant activities. a. Not subject to a preconstruction permit.
Small internal combustion engines used for welders, compressors and generators.	II.B.2 Any piston-type IC engine with a manufacturer's maximum continuous rating of no more than 50 bhp.
Diesel fuel tank	II.H.1 Any equipment used exclusively for the storage of unheated organic material with: a. An initial boiling point of 302 degrees F or greater; or b. A vapor pressure of no more than 0.1 psia.
Naptha/water storage tank	II.H.3 Any equipment with a capacity of no more than 6,077 gallons used for the storage of unheated organic liquids with a vapor pressure of no more than 1.5 psia.
Small degreasers	II.O.2 Unheated, non-conveyorized solvent rinsing tanks or unheated non-conveyorized coating dip tanks of 100 gallons or less and not using a halogenated solvent.
Maintenance shop	I. General criteria for insignificant activities. a. General repair and maintenance.
Air Stripping System	I. General criteria for insignificant activities. a. Emits no more than 0.5 tons/year of a HAP or 2 tons/year of a regulated pollutant.

## **VII. ACRONYMS, ABBREVIATIONS AND UNITS OF MEASURE**

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Acronyms, abbreviations and units of measure used in this permit are defined as follows:

**ASTM**

American Society for Testing and Materials

**BACT**

Best Available Control Technology.

**CAA**

The federal Clean Air Act.

**CARB**

California Air Resources Board.

**CFC**

Chloro-fluoro-carbons. A class of compounds responsible for destroying ozone in the upper atmosphere.

**CFR**

The Code of Federal Regulations. 40 CFR contains the implementing regulations for federal environmental statutes such as the Clean Air Act. Parts 50-99 of 40 CFR contain the requirements for air pollution programs.

**CO**

Carbon monoxide.

**CO<sub>2</sub>**

Carbon dioxide.

**ERC**

Emission reduction credit.

**Federally Enforceable**

All limitations and conditions which are enforceable by the Administrator of the U.S. EPA including those requirements developed pursuant to 40 CFR Part 51, Subpart I (NSR), Part 52.21 (PSD), Part 60 (NSPS), Part 61 (NESHAPs), Part 63 (HAP) and Part 72 (Permits Regulation, Acid Rain) including limitations and conditions contained in operating permits issued under a U.S. EPA approved program that has been incorporated into the California SIP.

**NESHAP**

National Emission Standards for Hazardous Air Pollutants (see 40 CFR Parts 61 and 63).

**NO<sub>x</sub>**

Nitrogen oxides.

## **VII. ACRONYMS, ABBREVIATIONS AND UNITS OF MEASURE**

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### **NSPS**

New Source Performance Standards. U.S. EPA standards for emissions from new stationary sources. Mandated by Title I, Section 111 of the federal Clean Air Act and implemented by 40 CFR Part 60 and SMAQMD Regulation 8.

### **NSR**

New Source Review. A federal program for pre-construction review and permitting of new and modified sources of pollutants for which criteria have been established in accordance with Section 108 of the Federal Clean Air Act. Mandated by Title I of the federal Clean Air Act and implemented by 40 CFR Parts 51 and 52 and SMAQMD Rule 202. (Note: There are additional NSR requirements mandated by the California Clean Air Act.)

### **O<sub>2</sub>**

Oxygen.

### **Offset Requirement**

A New Source Review requirement to provide federally enforceable emission offsets for the emissions from a new or modified source. Applies to emissions of ROC, NO<sub>x</sub>, SO<sub>2</sub> and PM<sub>10</sub>.

### **PM**

Particulate matter.

### **PM<sub>10</sub>**

Particulate matter with aerodynamic equivalent diameter of less than or equal to 10 microns.

### **PSD**

Prevention of Significant Deterioration. A federal program for permitting new and modified sources of those air pollutants for which the SMAQMD is classified "attainment" of the National Air Ambient Quality Standards. Mandated by Title I of the federal Clean Air Act and implemented by 40 CFR Part 52.

### **ROC**

Reactive organic compounds.

### **SIP**

State Implementation Plan. CARB and SMAQMD programs and regulations approved by U.S. EPA and developed in order to attain the National Air Ambient Quality Standards. Mandated by Title I of the federal Clean Air Act.

### **SMAQMD**

Sacramento Metropolitan Air Quality Management District.

### **SO<sub>2</sub>**

Sulfur dioxide.

## **VII. ACRONYMS, ABBREVIATIONS AND UNITS OF MEASURE**

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### **Title V**

Title V of the federal Clean Air Act. Title V requires the SMAQMD to operate a federally enforceable operating permit program for major stationary sources and other specified sources.

### **TSP**

Total suspended particulate.

### **U.S. EPA**

The federal Environmental Protection Agency.

### **VOC**

Volatile Organic Compounds.

### **UNITS OF MEASURE:**

BTU	=	British Thermal Unit
cfm	=	cubic feet per minute
cm	=	centimeter
g	=	grams
gal	=	gallon
gpm	=	gallons per minute
hp	=	horsepower
hr	=	hour
lb	=	pound
in	=	inch
kg	=	kilogram
max	=	maximum
m <sup>2</sup>	=	square meter
min	=	minute
mm	=	millimeter
MM	=	million
ppmv	=	parts per million by volume
ppmw	=	parts per million by weight
psia	=	pounds per square inch, absolute
psig	=	pounds per square inch, gauge
quarter	=	calendar quarter
RVP	=	Reid vapor pressure
scfm	=	standard cubic feet per minute
yr	=	year